

Anno 1778.

PHILLIPS ACADEMY



OLIVER WENDELL HOLMES

LIBRARY

Per ampliora ad altiora.



Pub. 5.60

HARVARD STUDIES
IN
CLASSICAL PHILOLOGY

*EDITED BY A COMMITTEE OF THE CLASSICAL
INSTRUCTORS IN HARVARD UNIVERSITY*

VOLUME LVI-LVII



CAMBRIDGE
HARVARD UNIVERSITY PRESS
LONDON : GEOFFREY CUMBERLEGE
OXFORD UNIVERSITY PRESS

1947

65722

COPYRIGHT, 1947

BY THE PRESIDENT AND FELLOWS OF HARVARD COLLEGE

480
H 26
v. 56-57

PRINTED AT THE HARVARD UNIVERSITY PRINTING OFFICE
CAMBRIDGE, MASSACHUSETTS, U. S. A.

PREFATORY NOTE

THESE Studies are published by authority of Harvard University and are contributed chiefly by its instructors and graduates, although contributions from other sources are not excluded. The publication is partly supported by a fund of about \$15,000, generously subscribed by the Class of 1856.

ARTHUR STANLEY PEASE	} EDITORIAL COMMITTEE
JOSHUA WHATMOUGH	
HERBERT BLOCH	

CONTENTS

THE ROMAN BRICK-STAMPS NOT PUBLISHED IN VOLUME XV I OF THE "CORPUS INSCRIPTIONUM LATINARUM"	I
Herbert Bloch	
THE MISSING PORTIONS OF THE "COMMENTUM EINSIDLENSE" ON DONATUS'S "ARS GRAMMATICA"	129
John Petersen Elder	
SELECTED STUDIES IN INDO-EUROPEAN PHONOLOGY	161
Gordon Myron Messing	
THE KNOWABILITY AND DESCRIBABILITY OF GOD IN PLATO AND ARISTOTLE	233
Harry Austryn Wolfson	
SUMMARIES OF DISSERTATIONS FOR THE DEGREE OF PH.D. . .	251

THE ROMAN BRICK-STAMPS
NOT PUBLISHED IN
VOLUME XV 1 OF THE
"CORPUS INSCRIPTIONUM LATINARUM"

BY HERBERT BLOCH

Amicis Romanis salutem

PREFACE

IN 1884, more than seventy-five years after its completion, Gaetano Marini's *Iscrizioni antiche doliari* was published by G. B. de Rossi. It was the first and fundamental edition of the *Instrumentum domesticum* of Rome with notable additions from other parts of Italy. Among the groups of inscriptions treated in this volume, the brick-stamps assumed first place in number as well as in importance. In contrast to them inscriptions of *amphorae*, lamps and water-pipes in Marini's judgment (p. 7) "are all of little importance and worthy . . . of living in the memory of posterity only because of their antiquity which always surrounds objects, even those of no value, with veneration and respect." The discoveries of the last half century have altered this low evaluation of *amphorae*, lamps, and similar monuments. In the history of the commerce of the Empire they have played an increasingly significant rôle. However, the men who manufactured these articles are known to us only from their trade marks. The matter is different with Roman brick-stamps. From its very beginning, the Roman brick industry attracted men and women of high social standing. That brick production could be considered as an offspring of agriculture made these interests legitimate even in the eyes of the staunchest upholders of the senatorial code. It was inoffensive to exploit the resources of one's estate and it proved to be a most lucrative business when bricks became as important in Roman building as concrete has been in our time. Between the pub-

lication of Vitruvius' handbook, old-fashioned as it was when it appeared, and the construction of the *Domus Aurea* a revolution took place in which burnt brick superseded to a large extent the traditional building materials. As early as in the days of Tiberius, Cn. Domitius Afer, the famous orator from Nemausus, saw the possibilities of developing brick production into a "heavy industry" in the modern sense. Scores of distinguished members of both *ordines* followed his lead. The devastating fire in 64 A.D. naturally produced a boom in the brick industry of the capital. More and more illustrious names appear on the brick stamps, from Faenius Rufus, *praefectus praetorio* of Tacitean fame, to his more powerful, but equally ill-fated colleague Fulvius Plautianus. Under Trajan and Hadrian, when the building activities of emperors and private individuals alike reached their peak, the brick industry was practically in the hands of the ruling class. The stamps enable us to follow in great detail the history of these big business establishments. Domitius Afer, e.g., founded his firm before 40 A.D. and it remained in the hands of his family for a hundred and fifty years up to the death of the emperor Commodus. Soon afterwards the brick industry of Rome virtually became an imperial monopoly.

Not less important are the brick-stamps in their relation to architecture. Many of them are dated, and most of the others at least approximately datable. Consequently, they date also the buildings in which they are found.

Marini was an eminent scholar who recognized most of the problems presented by the brick-stamps, but in three quarters of a century many new stamps had come to light. Therefore the new edition of the Roman brick-stamps in the *Instrumentum domesticum* of Rome, *CIL* XV 1, constituted a vast improvement in comparison with Marini's work. Heinrich Dressel, a pupil of Mommsen, discharged his task with an accuracy in reproducing the stamps which is truly admirable. Unfortunately, the indices have never been published, in this case a particularly serious defect because examples of the published stamps are continually found in Central Italy, often in fragments which cannot be easily identified without great loss of time even by those who know the brick-stamps well. The consequence of

the failure to provide indices to *CIL* XV 1 is that the reports of excavations are filled with fragments of unidentified stamps. It has been left to others to find out whether they belong to stamps already known or whether they are new. This is by no means an easy task. Marini was quite right in saying (p. 7) that the brick-stamps "are a group of monuments which on the ground of their laconic formulations and of bad preservation very frequently offer great difficulties to reading and understanding."

During the years in which I prepared my study on Roman brick-stamps it became increasingly clear that Dressel had paid too little attention to the topographical, archaeological, and historical aspects of his undertaking. Equally important was the increase of material in the fifty years which followed the publication of *CIL* XV 1, particularly from Ostia. For all this Dressel's volume is so antiquated that it cannot be brought up to date by supplements like other volumes of the *CIL*. It will have to be redone entirely. The Roman brick-stamps are a closed group of inscriptions found mostly on bricks, but also on certain large clay vessels ("*dolia*," "*pelves*," sarcophagi, and certain terracotta reliefs). They offer very special problems which do not occur in other inscriptions and stamps. Therefore they should be separated from the remainder of the *Instrumentum domesticum*. I have not given up hope of obtaining sometime the opportunity of making this edition in close connection with the topographical and historical problems involved; perhaps, even as it was planned in 1937, in collaboration with Dr. Guglielmo Gatti. In view of the general situation it seems to me best to present here as a preliminary step a collection of the brick-stamps which have become known since the publication of Dressel's volume. These stamps were inaccessible for all practical purposes because they were scattered throughout periodicals. Among them the *Notizie degli Scavi*, the *Bulletino Comunale*, and the *Papers of the British School in Rome* have been examined twice; the *Bulletino di Archeologia Cristiana*, the *Monumenti Antichi . . . dei Lincei*, the *Römische Mitteilungen*, and the various publications of the *Pontificia Accademia Romana di Archeologia* once. The brick-stamps found in Carthage by Delattre have been completely used, but I have not gone over the whole ma-

terial which has come to light in Africa since 1900 (since the publication of *CIL* VIII S 3). Other pertinent publications have of course been studied and it is hoped that not much of real importance has been overlooked.

In the course of my own investigations I was compelled to collect these stamps systematically, and not a few of them have been used in my study, where also a considerable number of new stamps were published. Most of these new stamps came from the buildings treated. In addition, I was able to draw from two other sources which have been exhaustively used for the present collection: the new excavations at Ostia, in which I took part from February, 1938 to January, 1939, and the great collection of brick-stamps in the Antiquarium Comunale. Guido Calza, the director of the excavations at Ostia, continued sending me rubbings of stamps found in the excavations, until political developments made this impossible. I wish to express my thanks to him for allowing me to publish these stamps. In the two years in which I followed the excavations I saw and identified about 2500 stamps from Ostia (not counting those from the buildings treated in my study).

At the suggestion of Antonio M. Colini, director of the Antiquarium Comunale, I identified the brick-stamps preserved in this museum, one of the largest, if not the largest collection of brick-stamps in existence. Since Dressel's time it had grown from about 2200 to about 4650 stamps. Among these the two best examples of each type were selected, numbered and housed in cases where they are now easily accessible. The existence of this collection which is being steadily expanded by new findings will help in the preparation of a new edition of the brick-stamps.

All inedited stamps from Ostia and the Antiquarium Comunale, with the exception of insignificant and unidentified fragments, are published here.

It must be strongly emphasized that this supplement to *CIL* XV 1 does not settle the question of a new edition; that its purpose is only to gather, for the time being, all brick-stamps not published in *CIL* XV 1 into a usable system. Therefore topographical indications are limited to a minimum and frequently suppressed, in spite of their

vital importance. For my Ostia material can be presented topographically only after I have seen the completed excavations, and, in general, the topographical point of view belongs to a new edition, and, naturally, concerns *all* stamps. Here the stamp as such and its interpretation are in the foreground. It must also be realized that various large collections of brick-stamps in Rome are still unexplored. They undoubtedly will greatly add to our knowledge. One of them must be mentioned here: the important collection which Thomas Ashby presented to the American Academy in Rome. This material is still unpublished (R. T. Ohl, *Mem. Am. Ac. Rome* IX (1931), 130 n.). What of it has been utilized by Ashby himself in his studies must be re-edited more accurately.

Numerous stamps which have been published as allegedly new since Dressel are in reality fragments of stamps edited in *CIL XV 1*. Only a few exceptional cases have been incorporated in this collection. To list all of these supposedly new stamps is a task reserved for the new edition. But wherever Dressel's readings have been substantially improved in consequence of new discoveries this has been noted. In many instances it was possible to combine fragments which had been published with each other or with fragments found by myself.

Particular emphasis has been given to the stamps of the great estates, to those of the emperors, of the Domitii, and of the important manufacturers of the earlier first century. Insignificant or badly copied fragments have been on principle omitted, since they would be rather an obstacle than a help in a collection like this; the very few new fourth-century stamps have been added at second thought and are published in the *Mantissa* (pp. 118-121, 597-615).

When in 1884 Marini's work appeared, it was equipped with an excellent index by Giuseppe Gatti. As matters developed, this index still is, after sixty years, the only index of brick-stamps in existence and naturally inadequate. I have therefore compiled indices of names and dates myself, knowing how much this will facilitate identification of stamps and any works in this field. They will comprise both, Dressel's volume, *CIL XV 1*, and the supplement published here.

In the interest of those who may use this collection, the new stamps are given in the order in which they would have appeared in *CIL* XV 1, even where Dressel's order is antiquated. Remarks on the text of Dressel's own stamps appear in their proper order. Frequently two or more different stamps had to be inserted between two of Dressel's stamps, e.g., there are two stamps which belong between *CIL* XV 1, 29 and 30. They are consequently designated as 29/30_I and 29/30_{II}. In organizing the *lateres privati* Dressel was unnecessarily inconsistent. Sometimes he assembled stamps of various workers of one brick-yard owner, e.g., the stamps of Herennius Pollio (1179-82) or Seia Isaurica (1418-25) under the name of the owner, and sometimes he separated them according to the name of the slaves, as in the case of the stamps of M. Fulvius (below 299-310). The first method is the only sensible one. It is followed below wherever possible.

All stamps listed here have been given their own number (beginning with 1) in bold faced type. The indices will refer to the numbers of *CIL* XV 1 in ordinary type, to my numbers in bold faced type. Throughout the collection numbers in ordinary type without specification refer to *CIL* XV 1. The description of the decoration on the stamps is given in Latin. The indications of dates ordinarily have not been transcribed. Stamps which I have seen are preceded by *.

Due to present conditions, it is impossible to reproduce properly the inscriptions. Ligatures have to be rendered with the help of the sign \frown ; \overline{AB} means that the letters A and B are in ligature. The frequent palm-leaves have to be noted by word rather than reproduced by typographical devices. Only the more common forms of stamps can be indicated by signs used in Astronomy and Mathematics (\odot , \circ , \square); for other forms reference to *CIL* XV 1 is made. It was not feasible either to block up rectangular stamps or to center the second and third lines of circular stamps.

ABBREVIATIONS

- AC Preserved in the collection of the Antiquarium Comunale in Rome.
- BC *Buletino della Commissione Archeologica Comunale del Governatorato di Roma*
- BL I-III H. Bloch, I bolli laterizi e la storia edilizia romana, BC LXIV (1936), 141-225 (=I), LXV (1937), 83-187 (= II), LXVI (1938), 61-221 (= III). The page numbers of the separate edition are added in parenthesis.
- CIL *Corpus Inscriptionum Latinarum*
- ILS H. Dessau, *Inscriptiones Latinae Selectae*, 3 vols., Berlin, 1892-1916
- NBAC *Nuovo Buletino Archeologico Cristiano*
- NS *Notizie degli Scavi di Antichità*
- Ostia 1938 Found in the excavations at Ostia in 1938 or 1939
or 1939
- PBSR *Papers of the British School in Rome*
- PIR *Prosopographia Imperii Romani*
(A-C in second edition, vol. I-II (1933-6; the continuation of this most important work was prevented by the German Government); D-Z still in the first edition, vol. II-III)
- SPASR I *Supplementary Papers of the American School of Classical Studies in Rome*, vol. I, 1905

LATERES URBANI

LATERES PUBLICI (*cf.* 1-8)

- *1 3/4_I ☉ HOREI·MAMERCIANIS
CAESARIS·A

Hor(r)ei(s) Mamercianis Caesaris A(ugusti).

Frequent in Ostia, also in 1938-9. Latest edition: *CIL* XIV S 1, 5308, 1.

- *2 3/4_{II}. Like 1: only difference: line 2 reads CAESARIS N = *Caesaris n(ostri)*. Ostia 1938 and 1939, at least two ex.

According to the analogy offered by 3 *Castris praetori(s) Aug(usti) n(ostri)*, these stamps indicate the destination of the bricks, not their origin as Dressel (*ad* 4) thinks possible. 4 is closely related: *Hor(r)eis Postumianis Caesaris n(ostri) A(ugusti)*. Neither building has been identified as yet. The examples hitherto observed probably belong to remainders which were used elsewhere, of 1 and 2 exclusively in Ostia, of 4 also in Rome. On 4 *cf.* *BL* II 92 (96), n. 87.

FIGLINAE ALBANIANAE

- 3 10/1 ○ C OSTRI SERR FIGLIN ALBANIAN
C. Ostri Serr(ani), (de) figlin(is) Albanian(is).
1871 (fragm.). Vaglieri, *NS* 1911, 264 (Ostia).

FIGLINAE BRUTIANAE (*cf.* 18-43)

The *Figlinae Brutianae* are probably to be connected with the *Campus Brutianus* and the *Vicus Brutianus* in the *Regio* XIV (Trastevere), on which *cf.* Platner and Ashby, *A Topographical Dictionary of Ancient Rome*, Oxford, 1929, 90, 570; Lugli, *I monumenti antichi di Roma* III, Roma, 1938, 629, 632. These localities presumably were situated near the Vatican, ancient centre of clay production (see Crostarosa, *NBAC*

III (1897), 208-10). Excellent roof tiles from the *Figlinae Brutianae* were used in the times of Trajan and Hadrian, when they first belonged to M. Rutilius Lupus, a high official of the emperor Trajan (*BL* III 184-8 (316-320)). His bricks are particularly frequent in Ostia where he had made numerous connections as *praefectus annonae*, about 107-114.

4 21. Dressel's restoration is confirmed in *CIL* XIV S 1, p. 755.

*5 29/30_I ☉ BRVTIA·M·R·L
nux pinea inter ramos duos
Brut(iana) M. R(utuli) L(upi).
NS 1909, 57 a (fragm., Ostia); other complete copies found there in 1938-9.

*6 29/30_{II}. Same stamp; but in the second line the right palm has been eliminated and replaced by an N. Ostia 1938. N evidently is the initial of a workman of Rutilius Lupus. 30 belongs to the same class; here the worker is called P O, meaning *p(er) O.* or the first two letters of a name like *Po(thi)*.

*7 30/1_I ☉ BRVTIA·M·R·L
 STR
 Ostia, Via Horrea Epagathiana, 1938, 5 ex. *Str.* indicates the beginning of a name like *Str(atonis)*. For this type cf. 26.

8 30/1_{II} ☉ M R L FL SER
M. R(utuli) L(upi), Fl. ser(vi).
NS 1909, 53 d (Ostia).

*9 31/2 ☉ M·RVTILI·LVPI
 BRVTIANA
BL I 192, 196 (52, 56) (Mercati di Traiano). The first line of this stamp later was deliberately destroyed; in this latter form the stamp is published as 32 (cf. *BL* I 196-9(56-9)).

*10 32/3 ☉ M R L
ramus palmae
M. R(utuli) L(upi). Ostia 1938-9.

The stamps 5-10 belong in the period of Trajan; they are anterior to the series of stamps dated in 114-7 (19-25), but slightly later than the varieties assembled under 29 (on which see *BL* I 217 (77)). In 123 the *Figlinae Brutianae* did not belong to Lupus any more (yet cf. 28), but at least partially to an unknown T. D. P. (unless T stands for *t(egula)*).

- *11 33/4 □ BRVt T.D.P
(cf. 37) B I t a L I S
BL III 83 (215) no. 138 to be combined with the fragment 37.

12 34. Dressel's restoration is confirmed in *NS* 1898, 242.

- *13 35/6 □ BRVT.T.D.P
 H E L I
BC XXXVII (1909), 127; *BL* III 83 (215) no. 149.

In 124 the *Figlinae Brutianae* were in possession of T. Statilius Maximus Severus Hadrianus, cos. suff. of 115 (for whom cf. *BL* II 177 (181)). This is shown by 38 and by 14.

- *14 38/9 ☉ DE·FICLINIS BRVTIAN STAT SEVERI
(formerly 287) HADRIANI GLAB ET·TORQVA a. 124

pal- ∞ pal-
ma ∞ ma

287 is based on two fragments and was wrongly listed by Dressel among the stamps of the *Figlinae Macedonianae* owned by the same Statilius Maximus. Two fragments discovered in Ostia 1939 supplement those of Dressel to the text given above.

- *15 39 □ VERO III·ET·AMB·COS a. 126
(completed) EX FVND·BRV·T·S·M·S·HADR
Ex fund(o) Bru(tiano) T. S(tatili) M(aximi) S(everi)
Hadr(iani).
NS 1909, 201 e (Ostia).

- *16 var. of 40 □ SQVILLA·ET·TITIANO COS a. 127
EX FVND BRVTINO STATIL
MAXIM SEVER·HADRIAN

BL III 100 (232) no. 15 (with a reference to earlier literature) (Ostia).

- 17 40/I_I ☉ EX P T·S·S·EX F·BR·F·FL·ONES
APRO ET CATVLLI a. 130
COS

Ex p(raedis) T. S(tatili) S(everi) ex f(iglinis) Br(utianis), f(ecit) Fl(avius?) Ones(imus), Apro et Catulli(no) cos.

NS 1909, 177 a (Ostia). Cf. Wickert, CIL XIV S 1, p. 755, who remarks that Dressel read in line 1 F·FL in place of Vaglieri's F·FI. Dressel's reading has been accepted here.

- 18 40/I_{II} □ BRVTIAN·EX FIG
T S SEVERI EX PR
NON IVL SER III cos a. 134
VIL VLP·P

Brutian(a) ex fig(linis) T. S(tatili) Severi, ex pr(aedis) Non(ianis), Iul(io) Ser(viano) [III co(n)s(ule)], Vil(li) Ulp(iani) p(er?). . . .

J. B. Frey, *Corpus Inscriptionum Iudaicarum* I, 1936, 216, no. 52 (Rome). This important stamp proves that the whole group of stamps 1453-5 was used in the *Figlinae Brutianae*. They are identical in structure with 18, except that the trade mark *Brutian(a)* is lacking. Therefore Dressel listed them among the *lateres privati* under Statilius Maximus. The name of the foreman Vil(lius) Ulpianus in 18 is added to those of Pontius Verus, . . . lius Ianuarius, and Aufidia Restituta in 1453-5. Line 3 may be read also *ex pr(aedis) Non(i) Iul(iani)*, but the other interpretation seems to me preferable (cf. Groag, RE XIX, 882, 891), because it would not necessarily imply that the distinguished consularis had leased brick-factories on estates belonging to others. However, definite clarity cannot at present be reached in this matter.

The dated stamps of Statilius Maximus' *Figlinae Brutianae* belong to the years: 124 (38, 14), 125 (probably 1452; cf. the similar form of 15), 126 (15), 127 (40, 16), 129 (17), 134 (18, 1453-5), while in his *Figlinae Macedonianae* dated stamps were used only in 123 (286) and 134 (288-9).

- *19 41/2_I □ EX·P·STAT·SEV
BRVTIAN·D

Ex p(raedis) Sta(tili) Sev(eri), Brutian(a), D. BL II 138, 165 (142, 169) (Villa Adriana). D. is the initial of a workman's name.

- *20 41/2_{II} □ EX·P·ST·SEV
B R V T D

Ostia 1938. Variety of 19.

FIGLINAE BUCCONIANAE (cf. 44-48)

- *21 Var. of 47. Same text as 47, but inside:

Victoria bigas agit sinistrorsum currentes
BL III 160 (292) no. I b (Ostia).

FIGLINAE CAELIANAE (cf. 49-51)

- 22 48/9 Form: crescent with the C·CASSI C·F·VET
horns squared off EX·FIGLINIS·CÆLIANIS
(like 980)

C. Cassi C. f(ili) Vet(eris), ex figlinis Caelianis. CIL VIII S 3, 22632, 13 (Hadrumetum in Africa Proconsularis). According to its form, the stamp belongs to the middle of the first century as Dressel rightly remarked (loc. cit.). The stamps of the Figlinae Caelianae previously known are connected with Seia Isaurica and are therefore Hadrianic. The stamp discovered in Africa has not been found in Rome. It reveals that this Roman brick-yard was active at least seventy years before the time of Hadrian.

FIGLINAE CAEPIONIANAE, etc. (cf. 52-110)

The *Figlinae Caepionianae* belonged in the time of Trajan partly to Plotia Isaurica, partly to C. Curiatius Cosanus, the latter identical with the *curator municipii Caeritum* of 113 (*ILS* 5918a; cf. *BL* I 186-7 (46-7)). Toward the end of Trajan's reign, Arria Fadilla, mother of the future emperor Antoninus Pius, acquired the brick-yard of Plotia Isaurica, taking over in her employment Plotia's foremen (*officinatores*). Between 127 and 134 she died and was succeeded by her son, then still Arrius Antoninus. Curiatius Cosanus' activity cannot be followed beyond 123. In that year and in 126 a certain Ti. Tutinius Sentius Satrinus owned part of the *Figlinae Caepionianae*.

*23 60 ○ STATI·MARCI·BASSI·EX·
(completed) PRA·PLOTIÆ·ISAVRICÆ.

Two fragments published by Dressel and referred by him to Statius Marcius Lucifer were completed by a finding in Ostia 1938 (*BL* III 214 (346)). It shows that Bassus, one of the most productive *officinatores* of Arria Fadilla, had also previously belonged to Plotia's staff.

*24 64 b (completed)
○ EX F PLOTIÆ ISAVRICÆ CÆPIONIANA *palma si-*
FORN·PECVLIARIS *nistrorsum*
SER *palma*
dextrorsum
Ostia 1939.

25 77/8_I ○ EX·FEGLINIS·ARRIAE·FAD·CÆ
C·IVLI LVPIONIS
Ex feglinis Arriae Fad(illae), Cae(pioniana), C. Iuli Lupionis.
NS 1914, 394 (Via Labicana); cf. *NS* 1909, 177 b (Ostia).

26 77/8_{II} ○ EX PR ARRIAE Fadillae CAEP
C·IVLI LVpioNIS
caduceus
NS 1911, 345; cf. the fragm. *NS* 1910, 102 b (Ostia).

- *27 78/9 ☉ C. IuLI·LVPIONIS
BC XXXIV (1906), 103, now AC.
- *28 84/5 ☉ EX·FIG·ARRIÆ·FADILLÆ
CÆPION·T·R·P
BL III 63 (195) no. 61 (Ostia); two other copies in Ostia
1938. Stamp of T. R(ausius) P(amphilus).
- *29 87/8 ☐ EX·P·ARR·FAD CAEP·RVF FEL
PAETIN·ET·APRON·COS a. 123
BL II 120 (124), no. 47, 166 (170), 187 (191), Fig. 30.
(Rome, Villa Adriana, Ostia).
- *30 90a. The last two words in line 1 should read PET PROCV.
NS 1908, 246 (Via Portuense).
- *31 90b has the same form as 90a; the last two words of line 1
should be read PETT PROCLI.
BL III 63 (195) (Ostia).
- *32 90/1 ☉ EX·PR·ARR·FAD·CEP·PROCLI
PAETINO ET APRONIAN a. 123
SOO
BL III 96 (228) no. 143 (Ostia). The text given there is
here revised on the basis of two other examples in AC. Stamp
of (Pettius) Proc(u)lus.
- *33 91/2 ☉ EX·PR AR F Q·SINAM·Q·A . . P
PÆTIN·ET APRON a. 123
SOO

Three fragmentary examples of this stamp are known to me. One of them (which I have not seen) was published by Gius. Gatti NS 1900, 24 n. 2 with the comment: *Il primo verso è di lettura ed interpretazione difficile*. The two other fragments, both comprising only the beginning, were found in Ostia 1938 and in AC. They make it possible now to understand from where the stamp comes, namely *Ex pr(aedis) Ar(riae) F(adillae)* (For this abbreviation of her name cf. 86). What

remains is clear in its general meaning. Two names, both starting with the praenomen *Q(uintus)*, of *offinatores* of Arria Fadilla, who are otherwise unknown. *Q. Si. Nam.* or *Q. Sin. Am.* and *Q. A.* . . Exact analogies are found in 88 and 89.

*34 102 ☉ T·R·P·EX·FIG CARC . . .

(improved) .C·C·C.

T. R(ausi) P(amphili), ex fig(linis) Car(i)c[i.....] C. C(uriati) C(osani). . . .

The fragment *BL III 64* (196) (Ostia) only slightly improves Dressel's reading.

*35 102/3 ☉ *Cae P EX·F·C·C* *palma dextrorsum*

(formerly 2069) ET AN

*ramus palmae
sinistrorsum*

Name of an *offinator*, *Cae]p(ioniana) ex f(iglinis) C(uriati) C(osani)* (or *C. C(uriati) [C(osani)]*). Second line uncertain: . . . *etan(i)* (?). *BL III 69* (201) no. 707 has to be changed accordingly (Ostia). There can be no doubt about the identity with 2069.

*36 106b (completed)

☉ EX·PR·C·C·C·C ////////////// AB EVRIP

PÆTIN·ET APRON a. 123

SOO

Ex pr(aedis) C. C(uriati) C(osani) C(aepionianis) ////////////// ab Eurip(o).

BL II 64 (196) must be corrected. The reading given here is based on various examples in AC and from Ostia. About six letters have been deliberately destroyed. The first of them seems to have been an S. Perhaps the eliminated words were SENT SAT (cf. 107).

*37 106/7_I ○ C↓C↓C↓C↓S↓PRISCVS↓

AB EVRIPO

C. C(uriati) C(osani), C(aepioniana), S. Priscus, ab Euripo. Ostia 1938. S. is the initial of the *nomen gentile* of Cosanus' foreman.

- 38 106/7_{II} ☉ L·C·S·C·C·C·P·S·P
nux pinea inter duos ramos

Latest edition *CIL* XIV S 1, 5308, 10. Wickert compares 1352: *Ex f(iglinis) S. P. S. G. C. C. P. S.* But the similarity is only superficial. With the help of 37, the following interpretation of 38 can be given:

L. C. S., C. C(uriati) C(osani), p(er) S. P(riscum).

All copies of the stamp have been discovered in Ostia.

- 39 109 ☉ EX PR TI TVTINI SENT SATRINI CAEP
 (completed) ANNIO VERO ET EGG AMBIB a. 126
 COS

NS 1908, 471 (Ostia). The stamp does not belong to the bricks *ab Euripo*, but to the *Figlinae Caepionianae*; it should be inserted between 104 and 105.

FIGLINAE CAMILLIANAE (cf. 112–115)

- 40 113/4 ☉ PriM·ARRVNTIAE·CA
 MILLAE·FEC
folium

[Pri]m(itius) Arruntiae Camillae fec(it).

BC XXIX (1901), 93, cf. NS 1901, 247 (Rome); NS 1887, 330 (Genzano), cf. *ib.*, 154. On Arruntia Camilla see Groag, *PIR* I, 228 no. 1152.

FIGLINAE CANINIANAE (cf. 116–140)

- *41 129/30 ☉ EX PR LVCIL VERI OP DO·EX·FIG
 (cf. 2071) CAN·VIBI PVDES

*ramus
 palmae*

Ex pr(aedis) Lucil(lae) Veri, op(us) do(liare) ex fig(linis) Can(inianis), Vibi(us) Pude(n)s.

BL III 127, 134 (261, 266) (Villa of Sette Bassi); *CIL* XIV S 1, p. 756 (Ostia); *CIL* VIII S 3, 22632, 16 (Carthage); from Carthage is also the small fragm. 2071. The stamp belongs to the middle of the second century. On Vibius Pudens see 182–3.

- 42 130/1 ☉ OPVS·DOLIAR·EX FIGLIN CANINIANIS
(cf. 1746) EX PR DOMITIAE LVCILLAE .

SVO

Bull. arch. 1902, 454 and *Rev. tunis.* XII (1905), 434 no. 47 (Carthage). The third line is published by Delattre only in the second example without any reference to the one published in 1902. Other fragments of the same stamp are: 1746, *Rev. tunis.* VII (1900), 283 no. 20, VIII (1901), 35 no. 100, XII (1905), 434 no. 46, all from Carthage. In the last mentioned publication Delattre remarks that the third line may be read either SVO or QAS.

- 43 135 *The following stamp is in mirror writing:*
(corrected) ☉ O DO EX PR IMP COMO AVC F CAN
or var. of 135 RVTILI SVCCCESS

palma

O(pus) do(liare) ex pr(aedis) Como(di) Aug(usti) f(iglinis)
Can(inianis) Rutili Success(i).

NS 1906, 408. It is likely that this stamp is identical with 135.

FIGLINAE DOMITIANAE, VETERES, NOVAE (cf. 148-206)

- 44 154 ☉ EX FIG DOMITIANIS OPVS DOLI
(completed) PVBLICI CONSORTIS

hippocampus; supra palmae ramus

NS 1911, 341 (Ostia).

- *45 160. Dressel's restoration is confirmed in *BL* III 161 (293)
no. II (points between all words) (Ostia).

- *46 170/1 ☉ OP·DOL·EX PR C FVL PLAVT PR PR
C V COS II FIG DOM MAIO a. 203-5

signum incertum

BL III 161 (293) no. III (Ostia); cf. P. Germano di Stanislao,
La Casa Celimontana dei SS. Martiri Giovanni e Paolo, Roma,
1894, p. 513 no. 27 (Casa dei SS. Giovanni e Paolo).

- *47 183/4 ○ OP DOL EX PR C FVL PLAVT PR PR
C V COS II FIG DOM MIN a. 203-5
Fortuna sinistrorsum respiciens s. cornu copiae,
d. gubernaculum tenet

BL III 161 (293) no. IV (Ostia); another example in AC.

- 48 198 ☉ EX FIGIL·VETERIS OPVS
(completed) DOL SVCCCESS
tridens sinistrorsum iacens

NS 1911, 264 (Ostia).

- *49 200/I ☉ ATIMETVS·VIBIÆ·EX F·N
Atimetus, Vibiae (servus), f(iglinis) N(ovis). AC.

FIGLINAE FABIANAE (cf. 207-210)

- 50 208. The first line starts as follows: L LVRI.
NS 1892, 347 c (Rome).

FIGLINAE FAVORIANAE (cf. 212-222)

- *51 219. Dressel's restoration is confirmed by Gu. Gatti, NS 1934, 154 (Rome) and AC.

- 52 222/3I ☉ OP DOL EX PR//C FVL·PLA/////

dE FIG FAOR C CAL////

sistrum et palma

Op(us) dol(iare) ex pr[ae(dis)] C. Ful(vi) Pla[ut...], de
fig(linis) Faor(ianis) C. Cal(petani). . . .

NS 1917, 96 (Rome); cf. BL III 161 (293) no. IX.

- (*)53 222/3II ○ EX·FIG·FAVRIANIS.
Capricornus sinistrorsum currens

Cozzo, *Mem. Acc. Linc.*, s. VI, vol. V, 1936, fasc. 4, Tav. XXXII, Fig. 103. This stamp is known to me only from this photograph. Cf. 212.

229 b; cf. below 184.

234; cf. below 177.

FIGLINAE GENIANAE (cf. 237-244)

- 54 243/4 ☉ P·AEL ALEX EX FIG GEN OP D
(cf. 1775) PÆTINO ET APRO a. 123
COS

NS 1890, 154 d (Rome). Other copies of the same stamp had been discovered, but poorly transcribed by Lanciani in 1870: cf. 1775. It is unknown to whom the *Figlinae Genianae* belonged in 123. P. Aelius Alexander, between 127 and 138, is found in the service of Arrius Antoninus (the future emperor Antoninus Pius) in the *Figlinae Caepionianae* (93). In 138 he worked for Domitia Lucilla the Younger in the *Figlinae Domitianae Minores* (172). The stamps 171 and 173 presumably were used in the following years. 717 shows him as a dependent of Caesar, probably M. Aurelius, obviously before the year 161.

FIGLINAE AB ISIS (cf. 248-255)

- *55 249. The last word in line 1 should be read MAX.
BL II 140 (144) (Villa Adriana).
- *56 var. I of ☉ EX·PRA TI CLAVDI·MAXIMI·
255 *ramus palmae*
BL II 95 (99) (Porto); one example in AC.
- *57 var. II of ☉ *palma* EX PRA·TI·CLAVDI MAXIM
255 *sinistrorsum*
BL II 95 (99) no. 10-15 (Porto). I wrongly called this stamp 255 b which actually does exist.

58 255/6



Scale ca. 1:3

Is(iaca).

Ostia 1938-9, various examples found together with stamps of the earlier years of Hadrian's reign. In all probability this stamp comes from the *Figlinae ab Isis*; cf. the sistrum as trade mark in 248-9 and 253.

DE LICINIANIS (cf. 258-279)

59 268 ☉ CN DOMITI CARPI DOLIARE
(completed) DOMITIAE LVCILL

nux pinea

NS 1892, 348 f (Rome).

60 268/9 ☉ Ex F DOM LVC CN *Domiti*
CAR*pi*

[*Ex*] *f(iglinis) Dom(itiae) Luc(illae) Cn. [Domiti] Car[pi]*.

NS 1893, 118; cf. BL III 191 (323) (Rome).

FIGLINAE LUSIANAE (cf. 280)

*61 280/1 ☉ APRON·ET·PAET·COS L·LVRI a. 123
CRESCENTIS

BL II 128 (132) (Villa Adriana), III 64 (196) (Ostia).

FIGLINAE MACEDONIANAE (cf. 281-300)

*62 281b (completed)

☉ ^{palma si-}~~nistrorsum~~ EX·FIG MACEDONIANIS ANTONIÆ ^{palma}~~dextrorsum~~
MALLIOLAE

P·S·F

Dressel, *CIL* XIV S 1, p. 755, suspected an F as the last letter of line 3. This was confirmed by an example in AC. But since 281a has in the same place P. S. L., undoubtedly a name, possibly introduced by *p(er)*, the same is probably true of 281b and I would *not* read with Wickert *P. s(ervus) f(ecit)*.

*63 281/2_I ☐ HERMETIS·ANTONIÆ
MANLIO·F //////////////

Hermetis Antoniae Manlio(lae) f..... (remainder deliberately destroyed). AC.

*64 281/2_{II} ☽ HERMETIS·ANTON·MANLIOLÆ

NS 1892, 477 (Rome). The Antonia Manliola of these stamps is identical with the lady mentioned in 822; cf. *BL* I 219 (79), II 176 (180). The correct order of her stamps is: 281, 63, 64, 822.

65 282/3 ☉ ← EX·FIGL·MACED ^{palma} AV·EM →
(cf. 2074)

Ex figl(inis) Maced(onianis) Av(illi) Em.

BC XXXIX (1911), 222 and *NS* 1911, 362. The same man is mentioned in 282 (Sex. Avillius Me . . .; the cognomen must now be read Em. . .).

*66 var. of 283 ☐ DE F·MACEDON
L P CASSIORVM

NS 1888, 735. A fragm. in AC.

- *67 283/4_I □ EX·FIGLINIS *Mace*DONIANIS
 (cf. 1778) P·CASSI
 C·LVSIDIVS·ADIVTORF
Ex figlinis [Mace]donianis P. Cassi, C. Lusidius Adiutor f(ecit).
 1778; BL III 69 (201) no. 706; 72 (204) (Ostia).
- 68 283/4_{II} □ DE F·MAC·FE . . .
 P·CASSI·CAE . . .
De f(iglinis) Mac(edonianis) fe, P. Cassi Caе. . . .
 NS 1890, 20 c.
- 69 286 ☉ EX·FIC STATILI SEVERI MACED NVNN
 (completed) REST·ET·LEON·PÆ·ET·APR a. 123
 COS
Ex fic(linis) Statili Severi Maced(onianis) Nunn(idi) Res-t(ituti) et Leon.
 NS 1888, 630 g.
- 287; cf. above 14.
- 70 291 ☉ EX PRAE HADRIANI MACEDONIAN
 (corrected) OFIC·A·MEMMIVS CLEM
Ex prae(dis) Hadriani Macedonian(is), ofic(inator) A. Mem-mius Clem(ens).
 NS 1891, 35.
- *71 300/1 ☉ · OPVS EX FIGLINIS MACEDONIA
 Fortuna
 NS 1910, 102 a (Ostia); another example in Ostia 1939.
- FIGLINAE MARCIANAE (cf. 302-329)
- *72 a 302/3_I □ C CALPETANI
 AVCTI *pulma si-*
 nistrorsum
 NS 1892, 42 (Rome), probably the same copy in AC.
- 72 b Same stamp, but no ligature. Punctuation by heart-shaped leaves. NS 1895, 395 d; 1932, 286 (First ship of Nemi).

- 73 302/3_{II} C·CALPETANI·AVCTI
Form unknown. NS 1922, 411, no. 6. Stamp on a sarcophagus. Stamps 74 and 76 were found on sarcophagi discovered with 73.

- 74 302/3_{III} AVCTVS·F
Auctus f(ecit).
Form unknown. NS 1922, 411 no. 5. I identify this Auctus with C. Calpetanus Auctus because 74 and 73 were found together. In the same way Pettius Proculus, *officinator* of Arria Fadilla (90; cf. 30-1), calls himself Proculus in 32.

- 75 302/3_{IV} Form: upper half CERDO
circle (like 673) CALPETANI
NS 1907, 520 (Rome). According to its form, this stamp belongs to the middle of the first century, in the time of C. Calpetanus Auctus. That Calpetanus stands for C. Calpetanus Auctus is made probable also by the following stamp.

- 76 302/3_V SAMSACA ^{palma}_{dextrorsum}
CALPETANI·S·FECIT
Samsaca Calpetani s(ervus) fecit.
Form unknown. NS 1922, 411 no. 7. Stamp on a sarcophagus like 73 and 74. These three sarcophagi were found together. Calpetanus is therefore to be identified with C. Calpetanus Auctus.

- *77 306c □ C·SATRINI·COMMVN
(completed) DE·FIGLINIS
MARCIANIS

AC. The stamp published by Romanelli NS 1929, 267 is apparently identical. The reading AT in line 1 and the unclear end of this line are undoubtedly due to typographical difficulties.

- 78 309 □ C·SATRINI·COMMVNIS
(completed) DE·MARCIANIS ☽
NS 1890, 154 f (Rome).


84 320. Dressel's restoration is confirmed in *NBAC* III (1897), 238 no. 123.

85 var. of 328 ☉ EX F MARCIANA . .

C M

NS 1909, 25 (Ostia).

FIGLINAE AD MERCURIUM FELICEM (cf. 332-334)

86 333/4  *protome Mercurii
petasati dextrorsum
cum caduceo* *ramus palmae* L. ATINI FELICE

L. Atini, (Ad Mercurium) Felice(m).

NS 1931, 291, with a picture (Nemi); another fragment of the same stamp is NS 1910, 71 (Ostia).

FIGLINAE MYRINIANAE (cf. 341-342)

*87 340/I_I ☉ IDIBVS MART EX FIGL. MYRINIANIS
APRONIANO. ET. PÆTINO a. 123

C S
O

Idibus Mart(iis), ex figl(inis) Myrinianis.

Ostia 1939, 2 examples. A fragment of the same stamp is published by Ashby, *Mem. Pont. Acc.* I 2 (1924), 144 (Monte Piccolo near Nazzano): APR (Ashby copied by error the in-IDIBVS terior row before the exterior).

Cf. the following stamp.

88 340/I_{II} ☉ IDIBVS MART EX FIG MYRINIANIS
PÆTINO ET APRONIAN a. 123

COS

NS 1895, 82 (Pagan columbarium connected with the cemetery of S. Ciriaca, Rome). Dressel's suggestion (*ibid.*) of reading [*ae*] *dibus Martis* cannot be maintained after the discovery of 87. The text of 88 given by G. Da Bra, *Le iscrizioni latine della basilica di S. Lorenzo fuori le Mura*, Rome, 1931, 151 no. 3, is wrong and hence omitted here. Naming the day certainly is strange, but I have no plausible explanation to offer and rather refrain from mentioning vague pos-

sibilities. It is noticeable that of the only two other stamps of the *Figlinae Myrinianae* one is dated in 135 (341), the other one about the same time (342). In this brick-yard stamps were not used ordinarily.

- 89 341. Completed: ATIL COS EX PR, etc. NS 1908, 268.

TEGULAE NAEVIANAE (cf. 343-346)

- *90 346 ☉ EX·PR·Q·SERV PVD·NAEVI
(completed) APR·ET PAET·COS a. 123
Ex pr(aedis) Q. Serv(ili) Pud(entis), Naevi(ana).
I have not noticed any traces of a third line.
BL II 131 (135) (Villa Adriana); 184 (188) ("Le Vignacce," Rome).

FIGLINAE NARNIENSES (cf. 347-353)

- *91 347/8 ☉ DE NAR EX FIGLINIS
ATERI CARI
De Nar(niensibus), ex figlinis Ateri Cari(ci).
AC. The same man is probably mentioned in the fragment 352.

FIGLINAE AB NEPT(UNO) (cf. 355)

- *92 var. of 355 ☉ PRISCI GAVIÆ AMYLLÆ
AB NEPT
Ostia 1938.

- *93 355/6 ○ PRIS·GAV·AMYL AB·NEP.
Pris(ci) Gav(iae) Amyl(lae), ab Nept(uno).
Ostia 1939.

FIGLINAE OCEANAE (cf. 357-386)

- *94 376/7 ☉ ^{palma}_{sinistrorsum} L·BRVTTIDI AVGVSTALIS
OPVS DOL FEC
nux pinea
L. Bruttidi(us) Augustalis opus dol(iare) fec(it). AC.

95 377 c. Dressel's restoration is confirmed in NS 1892, 348 h;
cf. BL II 125 (129).

96 384. Form: ☉. Of this stamp only one example had been recorded by Fabretti at the end of the seventeenth century. Hülsen found the fragment of a second one in the so-called chapel of Faustina between the temples of Vespasian and Concordia on the Forum Romanum. (*Röm. Mitt.* VIII (1893), 285). This stamp of C. Satrinus Clemens is closely related to 388, a stamp of C. Satrinus Celer from the *Figlinae Ocianae*. Contrary to Dressel's opinion, the *Figlinae Oceanae* are identical with the *Figlinae Ocianae*, an identification which is confirmed by Prof. Whatmough for linguistic reasons. The name is derived from Ocus; cf. 348.

FIGLINAE PLATANIANAE (cf. 392-397)

97 394. The last word in line 1 should be read COS.
BL II 141 (145) (Villa Adriana).


*98 var. of ☉ GLABRIONE·ET TORQVATO COS
395 EX FIG·CL·CELSI a. 124
folium vitis

BL II 117 (121) no. 7 (Villa Adriana); NS 1938, 403, Fig. 32 (Rome); cf. also the fragm. SPASR I, 22 no. 57. This variety is at least as frequent and widespread as 395 (Rome, Villa Adriana, Ostia).

*99 396 □ ASIATICO II ET AQVILI a. 125
(completed and cOS DE FICLIN·PLA
corrected) TANIANIS·T·S·M·S·H


[As]iatico II et Aquili(no) [c]os., de ficlin(is) Platanianis
T. S(tatili) M(aximi) S(everi) H(adriani).

This restoration is based on the fragment published by Dressel as 396 and on two fragments found in 1939 in Ostia. Dressel reads in line 1 (doubtfully) ET. Cf. the following two stamps.

- *100 var. I of  ASIACO·II ET·AQVILIN sic a. 125
 396 COS·DE·FIĆ·PLATA
 NIANIS·T·S·M·S·H

(For a transcription of this stamp cf. 99).


This reconstruction is based on the following five fragments: NS 1908, 109, 1909, 129 h; 1913, 49 (in the last fragment line 1 has: II; all from Ostia), one fragment from the Terme sul Decumano in Ostia and one in AC. The reading which I gave BL III 94 (226) no. 98 is erroneous and is corrected above.

- 101 var. II of  ASIACO II ET AQVIL sic a. 125
 396 COS DE FI LATANI sic
 ANIS·T·S·M·S·H

(For a transcription of this stamp cf. 99).

Reconstruction based on a combination of Ashby, *PBSR* IV (1907), 76 no. 3 with Vaglieri, NS 1908, 248. The omission of the P in line 2 is reported by Vaglieri. The text of this stamp given in BL II 184 (188), no. 53 is here revised.

FIGLINAE PONTICULANAE (cf. 398-407)


- *102 400/1  SEX·PVBLICI FAVSTI AVG CONS
 ORTIS OP DO EX FIG PO
 NTICES

NS 1910, 515, cf. 28; CIL XIV S 1, p. 755 (Ostia) and AC. The man who cut the stamp was thoroughly confused. It is to be interpreted as follows:

Sex. Publici Consortis, op(us) do(liare) ex fig(linis) Pontices(ibus) Fausti(nae) Aug(ustae).

On Sex. Publicius Consors see BL III 165 (297). He worked also in the *Figlinae Bucconianae* (44-46) and *Domitianae* (154, 186).

PORTUS PARRAE (cf. 409-412)

- 103 411. Form: . The last word of line 1 is CRISPI.
 NBAC VII (1901), 144 no. 87.

- *104 412. Line 3 reads OLME. Ostia 1939.

FIGLINAE PROPETIANAE (cf. 415-419)

- *105 418/9_I ☉ OPVS·DOL·EX FIG·PRÔPET·PRAED OR
TES PAVL·NEG·SAEN·VICTOR

piscis sinistrorsum

Opus dol(iare) ex fig(linis) Propet(ianis), praed(is) Ortes(i) Paul(ini), neg(otiatore) Saen(io) Victor(e).

Crostarosa, NBAC IV (1898), 234; cf. the fragm. SPASR I, 62 no. 270. Two fragments in AC. Hortensius Paulinus is undoubtedly identical with M. Cassius Hortensius Paulinus of ILS 3407 (Marini, *Iscr. dol.* p. 293). His bricks belong in the time of Commodus.

The following stamp is in mirror writing:

- 106 418/9_{II} ○ HORTENSI·PAVL·
LINI·

signum incertum (monogramma?)

Crostarosa, NBAC II (1896), 66 no. 45; III (1897), 236 no. 113.

FIGLINAE PUBLILIANAE (cf. 420-436)

- *107 420 ☉ L SESSI·SVCCCESSI DOLIARE
(completed) DE FIGLINIS PVBL
LIANIS

BL II 127 (131) no. 160; 156 (160). L. Sessius Successus, formerly in the service of M. Herennius Pollio (1180), was employed in the *Figlinae Publilianae* by Seia Isaurica, who occurs in 421. She also took over another of Pollio's *officina-tores*, named Cosmus (cf. 1181 with 1422).

- *108 423. Form: ☉. In line 2 read RVNTI. In centre: apparently a pine cone. NS 1892, 314 and elsewhere; cf. especially Gius. Gatti, BC XXXVII (1909), 123-4.

FIGLINAE QUINTIANAE (cf. 437-442)

That the *Figlinae Quintianae* must be distinguished from the *Praedia Quintanensia*, should have been obvious for grammatical reasons. But Dressel made no differentiation between them — against the better judgment of Marini (*ad* n. 25) before him. The *Praedia Quintanensia* which belonged in the time of Hadrian to Annius Verus, his wife Rupilia Faustina, and to the imperial freedman Agathyrus, are to be connected with the locality *Ad Quintanas* (BL III 77 (209)) or *Res publica Lavicanorum Quintanensium* (ILS 6217) near the present town of Colonna. The *Figlinae Quintianae* on the other hand derive their name from the nomen gentile Quin(c)-tius. Since a district of Trastevere was called even in later times *prata Quinctia* after L. Quinctius Cincinnatus (Platner and Ashby, *Top. Dict.*, 433), it may be suggested that the *Figlinae Quintianae* were perhaps located there. At any rate, they must be separated altogether from the *Praedia Quintanensia*. The *Figlinae Quintianae* belonged to Trajan and his wife Plotina and are not known thereafter.

109 438/9 ○ TONEI·DE QVINT

Tonei(ana) de (figlinis) Quint(ianis).

Ashby, *PBSR* III (1906), 162. Theoretically, one might interpret the first word as the genitive of the name Ton(n)eius, but analogies recommend the explanation given above; e.g. 658 a *Tonnei(ana) de ficilinis Vicc(i)anis* or 654 *Opus Tonneianu(m) ex (figlinis) Vesianis*. A further example of a mixture of *Tonneiana* with other *figlinae* is offered by 436: [Z]osimi Iuliae Dyna[. . . (servus)], ex figlinis Publilia[nis,] Tonneian[a]. The most likely explanation of this phenomenon is that in the *Figlinae Tonneianae* special methods were employed which other brick manufacturers adopted along with the name.

- *110 442/3 ☉ PLOTINÆ AVG QVINTIANÆ
FAOR

Plotinae Aug(ustae), Quintianae, Fa(v)or(is).

Ostia 1939. The first line is identical with 441 a.

PRAEDIA QUINTANENSIA (cf. 443-470)

Cf. above, p. 30 and especially *BL* III 72-78 (204-210) where proof has been presented that the stamps of the type 898 or 227 (all of 123) were used in these brick-yards of Annus Verus (cf. the list of the workers and their stamps *BL* III 74 (206)). They were published by Dressel among the *lateres privati*.

- *111 448=443/4 APRON ET PAE COS a. 123
(completed) ☐ CAMIL·D·Q ☐ *litt. cavis*

Camil(li) d(e praedis) Q(uintanensibus).

BL III 65 (197), 73-5 (205-7). With this stamp is to be identified the fragment *BC* LIII (1925), 286.

- *112 444/5 APRON ET PAE COS a. 123
☐ FORTVNA·D·Q ☐ *litt. cavis*

Fortuna(ti) d(e praedis) Q(uintanensibus).

BL III 65, 73-5 (197, 205-7) (Ostia). This Fortunatus also occurs in a stamp of the same group without *D. Q.* (1160).

448 cf. 111.

- *113 455/6_I ☉ APRON ET PAET COS ANNI a. 123
CER·QVINTAN

Anni Cer., Quintan(ense).

BL III 65, 72-3, 76 (197, 204-5, 208) (Ostia). Important because it definitely proves that Annus Verus' *praedia* were called *Quintanensia* (cf. also 116).

The following stamp is in mirror writing:

- *114 455/6_{II} D VETVRI CE . . . *litt. cavis*
Q

D. Veturi Ce[rdonis,] Q(uintanense).

BL III 73 (205) (Ostia). D. Veturius Cerdo was an offici-

nator of Annius Verus before (803-4, 1496; cf. 391) and in 123 (802).

- 115 455/6_{III} □ MAVQ *litt. cavis*
M. A(nni) V(eri), Q(uintanense).
 Ashby, *PBSR* IV (1907), 82; cf. *BL* III 76 (208).

- 116 455/6_{IV} MAFQVINTAN *litt. cavis*
 (cf. 1870)
M. Anni F., Quintan(ense).
NS 1900, 570; cf. the fragment 1870. *AC*. Cf. *BL* III 76 (208). Stamp of a freedman of Annius Verus (cf. also 113).

- *117 460 DRDQ *litt. cavis*
 (completed)
D. R. D., Q(uintanense).
 Ostia 1938. *D. R. D.* was an *offinator* of Rupilia Faustina.

- *118 470/1 ☉ NIG ET CAM COS L CL·BERYLL *a.* 138
 EX PRAED QVINT
Nig(ro) et Cam(erino) cōs., L. Cl(odi) Beryll(i) ex praed(is) Quint(anensibus).
 Ostia 1938. Very badly preserved example. *L. Cl(odius) Beryllus* was probably an *offinator* of the imperial freedman Agathyrus to whom the *Praedia Quintanensia* belonged in the period from 135 to 152.

FIGLINAE RHODINIANAE (cf. 471-474)

- *119 471/2 □ PEDVC LVP·EX
 FIG·RHOD CÆS N
Peduc(aei) Lup(uli), ex fig(linis) Rhod(inianis) Caes(aris) n(ostri).
AC. *BL* III 197 (329) and Ostia 1938. *Peducaeus Lupulus* worked for *Iulius Stephanus* about 130 (under the consulship of *Arrian* and *Severus*: 244) before he entered the service of *Hadrian* in the *Figlinae Rhodiniae* where he occurs in 133 (471). Probably later on he was active in the brick-yards of *Domitia Lucilla* (1052).

OPUS SALARESE (cf. 478-532)

According to the information contained in stamps, the clay of the Tiber valley which was found along the Via Salaria near Rome, was used *extensively* for bricks only under Hadrian. These bricks are definitely of inferior quality in comparison, e.g., with bricks of the *Figlinae Brutianae*. A very high percentage of them were cut as *bessales* or *semi-lateres* (half *bessales* of triangular shape) and employed especially in hypocausts and for facing walls.

*120 479/80 ☉ SAL EX PR ANN VERI F STA

PHILVS ^{palma}
_{dextrorsum}

Sal(arese) ex pr(aedis) Ann(i) Veri, f(ecit) Staphilus.

Ostia 1938; a fragment also in AC. BL III 77 (209) n. 165.

121 var. of 481 SAL·EX PR
(cf. 1809) AN·VER Q ^{litt. cavis}

Sal(arese) ex pr(aedis) An(ni) Ver(i), Q.

Bull. Arch. Crist. IV (1888/9), 123; cf. the fragm. 1809 (Rome). The last sign probably stands for a Q. and refers to a workman, as the sign at the end of 481 apparently stands for a Y; other examples omit it altogether.

122 var. of 484 ☉ SAL EX PRAE CAES ARMini
PAET·APRON

a. 123

^{protome?}

Sal(arese) ex prae(dis) Caes(tini) Arm[ini].

BC LIX (1931), 215 (Rome).

*123 485/6 □ SAL EX PR . . .
ARMINI C . . .

Sal(arese) ex pr[ae(dis)] Armini C[es(tiani)].

AC. The only undated stamp of Arminius Cestianus. SPASR I 54 n. 220 has the same stamp, but with the remark "impressed." If this is correct, the latter stamp must be a variety of 123; cf. 1810 b.

- *124 486b ☉ APRON ET PÆTIN·COS a. 123
 (completed and EX·FIG COR MANLIOL
 corrected) SALAR *v. 3.4 lineis rectis*
 P·P·B
Ex fig(linis) Cor(neliae) Ma[n]liol(ae), Salar(ese), P. P. B.
BL III 146, 176 (150, 180) and n. 151 (Villa Adriana and
AC). Cornelia Manliola was a relative of the consularis Cor-
nelius Severus (125-6).
- *125 486/7_I SAL·EX·PR COR SEVE *litt. cavis*
 (cf. 954)
Sal(arese) ex pr(aedis) Cor(neli) Seve(ri).
NS 1916, 426 (Ostia); 1934, 228 (with fig.); BL I 188 (48);
II 161, 175-6 (165, 179-180) (Isola Sacra, Villa Adriana).
Stamp 954 is lacking the word Sal., otherwise it is identical
with 125; cf. 126. Cornelius Severus was consul suffectus
in 112.
- *126 486/7_{II} EX·PR C S *litt. cavis*
Ex pr(aedis) C(orneli) S(everi).
AC. Cf. 125 and 954. It is not certain whether this stamp is
complete in the beginning.
- *127 var. of 487a ☉ PAETINO ET·APRON . . . a. 123
 EX P IVL EVTAC·SAL
BL II 146 (150) (Villa Adriana).
- *128 var. of 487b PAETI ET APR COS a. 123
 EX P IVL EVTA SAL *litt. cavis*
BL II 142 (146) (Villa Adriana).
- 129 488 (completed) ☉
 SERVIANO III ET VARO COS·EX PRAE IVN IVLIANI
 EX OF·GABIN SVCCES·SALARE a. 134
Ex prae(dis) Iun(i) Iuliani, ex of(ficina) Gabin(i) Suc-
ces(si), Salare(se).
BC XXIX (1901), 134 (Rome).

130 489. Line 2 reads EX PRAE IVN. . . . NS 1904, 158 (Rome).

*131 492/3_I APR·ET·PAE·C a. 123
A·G·S·S·D·F·I·H *litt. cavis*

A. G(abini) S(uccessi), S(alarese) d(e) f(iglinis) I(uliani), H.

NS 1910, 190 a (S. Cesareo near Velletri); BL II 125 (129) no. 122 (Villa Adriana). This and the following two stamps are discussed BL III 191 (323). H. is the initial of a workman of Gabinius Successus.

*132 492/3_{II} APR·ET·PAE·C a. 123
A·G·S·S·D·F·I·S *litt. cavis*

BL II 129 (133) (Villa Adriana); cf. the fragment SPASR I 28 no. 81. Here the name of the workman starts with an S.

*133 493. The missing letter in line 2 is an F. BL II 125 (129) no. 121 (Villa Adriana).

*134 497 ☉ A·GAVINI SVCCCESSI
(completed and SALARESÆ sic
corrected)

BL II 147 (151) (Villa Adriana); cf. NS 1900, 27 (Tor de' Schiavi; incorrectly published).

*135 498/9 ☉ APRONIAN ET PAETIN COS a. 123
EX P TVR PRI SAL

Ex p(raedis) Tur(rani) Pri., Sal(arese).

Museo Nazionale delle Terme (complete copy). A fragmentary example was read by Dressel (NBAC II (1896), 76 no. 92) line 1 as above, line 2: EX ////////// YRI SAL; there can be no doubt about the identity of the two stamps. A third example was published by Frey, *Corp. Inscr. Iud.* I, 215 no. 43. It is very likely that a fourth copy is known, published by Vaglieri as follows (NS 1908, 177, Rome):

☉ EX P TVR PR SAL
APRONIAN ET PAETIN COS

Vaglieri printed by error the interior row before the exterior and omitted the I after PR. Tur(ranius) Pri. is probably a brother of L. Turr(anus) Gal. who appears in 498 together with a certain T. T. as manufacturer of *opus Salarese* (and alone, apparently, as producer of *opus Sulpicianum* in 592 and 1834 (?)). The same pair, it seems, occurs again in

- *136 503 ☉ PÆTIN·ET APRONIAN·COS *a.* 123
T·T·A C·T G

and in

- *137 var. of 503 ☉ T · T · A C · T · G ·
PAET ET APRONIAN *a.* 123
SOO

T. T. AC T(urrani) G(al.).

The meaning of AC is doubtful; *BL* III 66 (198) (Ostia) and AC.

In 500 and 501 the same T. T. is joined with a certain G. T. 498, 500 and 501 share the *offinator* P. P. B., whom we encounter in the same year 123 in the service of Annius Verus (478–9) and Cornelia Manliola (486).

T. T. finally is associated with a third name C. P. G. in the following stamps:

- *138 501/2_I ☉ C·P·G·T·TE·PE·ET·AP *a.* 123
COS

C. P. G., T. Te. P(a)e(tino) et Ap(roniano) cos.

NS 1911, 198; *ibid.* 407 (fragm.) (Ostia); cf. *CIL* XIV S 1, 5308, 38 and *BL* II 177 (181). In the only complete example Vaglieri read PÆ. Another complete copy was found in Ostia 1939 in which I read distinctly PE. We learn from this stamp that the cognomen of T. T. started with TE.

- *139 501/2_{II} ☉ PAETIN ET APRONIAN COS *a.* 123
(cf. 2212) C·P·G·T·T

NS 1909, 129 b, 178 h; *CIL* XIV S 1, 5308, 37 and the fragment 2212 (all from Ostia); *BL* II, 147 (151) (Villa Adri-

ana). AC. Dressel and Wickert relegated this stamp like 138 and 141 to the *Lateres Ostienses*. But at least one example of 139 has been discovered in the Villa Adriana where no brick from Ostia has so far come to light, and one copy each of 139 and 141 are in AC, and consequently were found in Rome.

*140 502 b ☉ C ▼ P ▼ G ▼ T ▼ T
(completed) PAETIN ET APRONIA a. 123
SOO

Ostia 1939. Dressel's restoration of 502 (a and b) has to be corrected accordingly. The existence of 502 a, based alone on Fea's testimony about a fragment, is dubious.

*141 var. of 502 b ☉ C ▼ P ▼ G ▼ T ▼ T
PAET ET APRON a. 123
SOO

AC and a fragm. Ostia 1939. This stamp can be identified with another stamp from Ostia reported by Vaglieri, *NS* 1913, 355 = *CIL* XIV S 1, 5308, 36: lines 2 and 3 as above, line 1 as follows: *eX.P.C.T.T*. The C has been confused with G and the P induced the editor to read an X instead of a C (= *ex p(raedis)*).

While I cannot offer any suggestion for the identification of the two associates of T. Te., namely G. T. (to think of G(al.) T(urranius) is hardly permissible) and C. P. G., T. Te. may be known to us:

*142 525/6 EX PR.T.T.SAL *litt. cavis*

AC. There is one proprietor of *figlinae* producing *opus Salarese* with these initials: Trebicia Tertulla (524-5). So this stamp may be read as follows:

Ex pr(aedis) T(rebiciae) T(ertullae), Sal(arese).

Since in 138 the anonymous is called T. Te., the identification of T. Te. with Trebicia Tertulla seems to be the best solution, as it is not likely that in the same region two owners with identical initials would have used initials only.

The results may be summed up as follows: Trebicia Ter-

tulla appears alone in the stamps 524 (distinctly prior to 123), 525, and 142. In 123 she shared her brick-yards with

(1) L. Turranius Gal. (also called T. G.): 498, 503 (= 136), 137;

(2) G. T.: 500, 501;

(3) C. P. G.: 138-141;

(4) A. C.: 503 (= 136) and 137; cf. *ad* 137.

One objection against this reconstruction must be mentioned however. In stamps of *opus Salarese* usually their origin is stated. There are only very few exceptions: 146-7, 518 b (?); but cf. 126 and 954. Dessau, in a note to *CIL* XIV S 1, 5308, 36 = 141, referred to the stamp 1466 of 123, in which a C. Tarr. Titianus appears as proprietor, and one could also think of 1480, another stamp of 123, in which the owner is called TRTR — but Dessau, Wickert and Vaglieri had not noticed the indisputable relation which connects the stamps 138-141, and this means that the cognomen of the anonymous starts with Te.

*143 503/4 APR·ET PAET COS EX PR *litt. cavis* a. 123
(cf. 1812) M VLP·VLPIANI·SALAR
Ex pr(aedis) M. Ulpi Ulpiani, Salar(ese).

AC; cf. the fragments 1812 and SPASR I, 28 no. 87. They were too small to suggest any identification. M. Ulpius Ulpianus was known as an owner of brick-yards through a number of stamps which all are dated: 504-5 (125), 506 (126), 507 (129), 508-9 (133). His career can now be followed over ten years.

144 509/10? ☉ AVG·ET·SER·COS·EX·PR a. 132
SAB·AVG·SALAR ?

Aug(urino) et Ser(giano) cos. Ex pr(aedis) Sab(inae) Aug(ustae), Salar(ese).

Vaglieri, *NS* 1907, 12 (Rome), who published this stamp, remarked that as a consequence of its discovery, the fragment edited by Dressel as 510

Augurin ET SERG COS a. 132
ex pr A Ga AVG · SAL *litt. cavis*

would have to be changed, obviously into

ex pr Sab AVG · SAL.

That the two stamps belong together cannot be doubted. The round stamp 144 was used for *bipedales* and other more valuable bricks, the impressed stamp 510 for *bessales*. Cf. the identical relationship of 478 to 479, 483 to 482 and 484, 486 b to 486 a, 487 a and 127 to 487 b, c and 128; and particularly 504, 506 a, 507 a, 509 to 505, 506 b, 507 b, 508. But Vaglieri overlooked the fact that Dressel's restoration was based on good grounds: 511, a stamp preserved in one copy only (in AC where I have seen it again), unquestionably belongs to an A. Gabinius Aug(ustalis):

SERVIANO III cos a. 134
EX PR A GA AVG Sal *litt. cavis*

To this stamp a fragment can be added which Dressel published among the fragmentary stamps without noticing the connection:

145 510/I ☉ *Serviano III et VAR COS EX·FIG* a. 134
 (cf. 2029) *A. GabIN·AVGVST Sal*
[Serviano III et] Var(o) cos. Ex fig(linis) [A. Gab]in(i)
August(alis), [Sal(arese)].

Once more there is a round stamp associated with an impressed stamp dated in the same year.

The problem remains whether Vaglieri's reading of 143 was correct. Should one read in 143 SAB AVG or GAB AVG? The letters S and G, when defective, can easily be confused (e.g. Crostarosa, *NBAC* VI (1900), 157 read A SAB SVC on a stamp instead of A GAB SVC etc. = 495/6 as Gius. Gatti corrected, *NS* 1900, 230) and Vaglieri's readings of stamps are not too trustworthy. The decision in this case would afford some historical interest, because if the stamps 144 and 510 did belong to Sabina, they would be the first evidence that Hadrian's wife had an interest in the brick industry of the capital. But the evidence supports the reading GAB AVG.

- *146 513/4 ☉ DE·PR·M·AN·LIB·EX·oF·A·PON CLOD
IVLIANO ET·CASTO a. ?

palma
sinistrorsum

COS

palma
dextrorsum

De pr(aedis) M. An(ni) Lib(onis), e[x o]f(ficina) A. Pon(ti) Clod(iani).

BL III 149–50 (281–2) with detailed comments; I, Tav. B, Fig. 8 (S. Balbina, Rome). Annius Libo was the uncle of the emperor Marcus Aurelius. A. Pontius Clodianus previously worked for Domitia Lucilla (see below 276). On the consulship of Iulianus and Castus cf. *Class. Phil.* XXXIX (1944), 254–5.

- *147 515/6 ☉ EX·FIGILINIS·SERGIAE·PAVLINAE
PAETINO·ET APRONIA a. 123

SOO

palma
sinistrorsum

BL II 175–6 (179–80) (Ostia); the text given there is here corrected on the basis of two other examples in AC. Sergia Paulina was the wife of Cornelius Severus (cf. 125–6) and succeeded him before 123 as possessor of his brick-yard, which she still owned in 134 (516).

- *148 522/3 ☉ L·V·VAL EX PRÆ SALARE
PAETIN APRONIA a. 123

SOO

L. U(rsi) Val(eri), ex prae(dis) Salare[sibus or name of an officinator].

BL II 147 (151), 177 (181) (Villa Adriana). L. Iulius Ursus C. Valerius Flaccus, who appears also in the stamps 521 and 522, was a relative of L. Iulius Ursus Servianus, consul for the third time in 134.

525/6 see above 142.

- *149 529/30_I □ SAL F *litt. cavis*
Sal(arese) F.

NS 1893, 30 (Rome); *BL* II 132 (136) (Villa Adriana).

- *150 529/30^{II} ☉ The following stamp is in mirror writing:
SALARESE *litt. cavis*

Cf. NS 1889, 402 (Via Labicana) and NS 1893, 30 (Rome), which both have only *Salar*. BL I 202 (62) (Rome).

- 151 530/1 ☉ A·GELLI·KARI·EX·P·SAB·R
APR·ET·PAET *a. 123*
COS

A. Gelli Kari, ex p(raedis) Sab(inis?) R.

NS 1891, 30 b (Rome); NS 1910, 190 (S. Cesareo, Velletri).

- *152 532/3 ○ M'·PACCIVS·VERNÆS
AC. 2 ex. This is a stamp of the Manius Paccius Verna who, in the beginning of the second century, worked for Servilius Capito in the *praedia Sabina* (532).

FIGLINAE SEXT. (cf. 539–540)

- 153 540. Completed: AELIAN EX·P·V·N APR etc.
NS 1903, 468. (Gius. Gatti's reading VLPIAN for AELIAN must be due to an error).

FIGLINAE SUBORTANAE (cf. 542–547)

- *154 542/3 ☉ ^{pal-}ma EX·P·CÆ L·LAB·BARS ^{pal-}ma
Ex p(raedis) Cae(saris), L. Lab(eri) Bars.
NS 1911, 75 (Rome), also found in Ostia 1938. The L after *Cae* is the praenomen of Laberius and should not be connected with the preceding word to *Cael*; cf. 542. The stamp belongs to the time of Trajan.

- *155 544/5 ☉ ST MAR·FORT·EX·PR·CÆS
SVBOR
St(ati) Mar(ci) Fort(unati), ex pr(aedis) Cæs(aris) Subor(tanis).
NS 1898, 242 (Incomplete; cemetery of Via Ostiense); BC XLII (1914), 206 (Rome); a third ex., not identified, NBAC II (1896), 67 no. 46; AC.

1275 should follow this stamp. 1275 b is of the same time as 62 and 1248 a, both of which seem to belong to the latter part of the first century. 1275 is hardly older. To 1275 a, b add:

156 var. I of □ STATI M FORTV

1275

Stati M(arci) Fortu(nati).

NS 1908, 246.

*157 var. II of ☉ STA MARCI FO

1275

Ostia 1939.

FIGLINAE SULPICIANAE (*cf.* 548–600)

*158 558/9 ☉ D L.ÆLI ALEXANDRI

D(oliare) L. Aeli Alexandri.

AC. This *officinator* of Domitia Domitiani, the widow of the emperor Domitian, should not be confused with P. Aelius Alexander, *officinator* of Domitia Lucilla (see above 54).

159 var. of 564 M·VINICI
PANTAGATI·SVL

Form unknown. NS 1910, 89 (Rome).

160 var. of 570 ☉ SVPICLANV·ÆLI SIL *sic*
(not rather SVL . . ?)

Reported by Thomas Ashby on the margin of his copy of *CIL* XV 1, now in my possession, *ad* 570 ("3/XII/03"). The identification of the volume as Dr. Ashby's is owed to Dr. Marion E. Blake to whom I wish to express my thanks.

161 var. of 578 ☉ TI *Claud*·BLASTI
SVLP *v. 2 linea recta*

Reported by Thomas Ashby like 160, *ad* 578.

162 var. of 581 ○ ZOS SVP (not rather SVLP ?)
NL (?)

Ashby, *PBSR* IV (1907), 84. (Z in mirror writing)

- *175 606/7_I □ EX·PR·AB·CAE·FYR
PAET·ET·APRON·COS a. 123

Ex pr(aedis) Ab(urni) Cae(diciani), Fyr(mi).

NS 1909, 177 d, 208; NS 1913, 48; cf. CIL XIV S 1, p. 755 (Ostia). BL III 83 (215), no. 150-2.

- *176a 606/7_{II}=614 □ EX·F·TEMP·S AB CAED·TEG
(completed) SERV·FIRM PÆT·ET APR COS a. 123

Ex f(iglinis) Temp(esinis) S. Ab(urni) Cæd(iciani), teg(ula) Serv(ili) Firm(i).

NS 1890, 155 (fragm.; Rome); 1908, 108; 1909, 208 no. 3 (Ostia). BL III 82 (214) (Rome).

The meaning of the S is not clear; but cf. Dressel's comments on this stamp.

- 176b Same stamp. But in line 1: CÆD. Ostia 1938. Another fragment in AC.

- *177 606/7_{III}=234 TEG TEMP SER FIR EX P AB CE
(completed) VERO·III·ET AMBIBVL COS a. 126

Teg(ula) Temp(esina) Ser(vili) Fir(mi) ex p(raedis) Ab(urni) C(a)e(diciani).

The fragment 234 was wrongly published by Dressel among the stamps from the *Figlinae Furianae*. Cf. the fragm. NS 1909, 129 g (Ostia). BL II 120 (124) (Villa Adriana); III 81 (213) (Rome), 98 (230) (Ostia).

- 178 605. *P. Servili Firmi d(e) T(empesinis) Abur(ni) Caediciani.*
This stamp corresponds to 233 from the *Figlinae Furianae*.

- *179 var. of 607 ☉ EX·F·TEMP·Q·AB·CAED·VIS·FOR
Apr. ET·PAE·COS a. 123

Ex f(iglinis) Temp(esinis) Q. Ab(urni) Cæd(iciani), Vis(mati) For(tunati).

NS 1938, 401, Fig. 31 (Via S. Basilio, Rome). Almost identical with 607. Vismatius Fortunatus was a freedman of Vismatius Successus, in whose service stamp 1521 shows him as Fortunatus, obviously before 123 (BL II 110 (114)).

- *180 607/8_I ☉ EX F AB C·VISMAT FORTV
 ASIA II·ET AQVI a. 125
 COS

Ex f(iglinis) Ab(urni) C(aediciani), Vismat(i) Fortu(nati), Asia(tico) II et Aquilino) cos.

AC (complete example). Cf. the fragments Vaglieri, NS 1910, 185 a and BL III 91 (223) no. 2, both from Ostia. The text given there, p. 111 (243) n. 181, must be corrected accordingly.

- *181 a 607/8_{II} ☉ EX·F·TEMP ABVRN CAEB VIS·FOR sic
 VERO III ET AMB COS a. 126
nux pinea

Ex f(iglinis) Temp(esinis) Aburn(i) Cae[b](diciani), Vis(mati) For(tunati).

BL III 91 ff. (223 ff.) (Ostia); the fragment NS 1912, 210 (Ostia) belongs either to 181 a or to 181 b.

- *181 b Same stamp. But in line 1: ABVR CAEB (instead of ABVRN CAEB). A complete example in AC. Two fragments BL II 139 (143) no. 403 and 120 (124) no. 51 (the latter fragm. is wrongly identified with 181 a) (Villa Adriana).

- *182 607/8_{III} ☉ TEMPESINA·Q·A·C·VI·PVD F
 TITIAN·ET GALLICAN a. 127
 COS

Tempesina (sc. tegula) Q. A(burni) C(aediciani), Vi(bius) Pud(ens) f(ecit).

BL III 91 (223) no. 8 (Ostia); cf. the fragments 1842, NS 1909, 57, 95, 208 no. 5; 1911, 264 b (Ostia) and AC.

- *183 607/8_{IV} ☉ TEMPESINA·Q·A·C·VI PVD
 TITIAN·ET·GALLICAN a. 127
 SOQ

(For a transcription cf. 182)

BL III 91 (223) no. 1. Cf. NS 1909, 208 no. 4; 1910, 185 b

and CIL XIV S 1, p. 756 (Ostia) and AC. Vibius Pudens was later in the service of Domitia Lucilla; see above 41 and below p. 48.

*184 607/8_v
(cf. 229b)

☉ Q·ABVRNI CAEDICIANI EX·FIG TEMPESIANIS
ANTONINO AVG III ET VERO a. 140
COS

BL III 126 (258) no. 66 (Villa of Sette Bassi). In BC XXXIV (1906), 103 (incomplete) it was not recognized that 229 b is a fragment of this stamp, listed erroneously by Dressel among the stamps of the *Figlinae Furianae*. Cf. the analogous stamp 229 a in the *Figlinae Furianae*.

*185 608/9_I ☉ Q ABVRNI CAEDICIANI . .
FIG TEMPESINI

Ostia 1938. The letter immediately following *Caediciani* is a C, G, O, or Q. This stamp seems to correspond to 230 from the *Figlinae Furianae*.

*186 608/9_{II} ☐ Q·ABVRNI CAEdic
EX·FIG TEM·ET·Fur

Q. Aburni Cae[*dic(iani)*], ex fig(*linis*) Tem(*pesinis*) et F[*ur(ianis)*].

BL III 124, 133 (256, 265). Another fragment in AC. This seems to be the only possible way to complete the stamp, which is unique in its character.

*187 608/9_{III} ☉ P·OCI ANTIOCI·EX·FIGILINIS ^{palma}
(cf. 2036) ABVRNI CAEDICIANI _{dextrorsum}

The reading in NS 1913, 355 d (Ostia) is incorrect and Wicker's suggestion CIL XIV S 1, p. 755 is disproved by the examples (3) found in Ostia 1938. It is not known from which of the two brick-yards this stamp comes. P. Ocius Antiochus had previously been in the service of Plotina, the wife of Trajan (700).

614; cf. above 176a.

The high rate of production (particularly of roof tiles) in the *Figlinae Tempesinae* of Q. Aburnius Caedicianus was not maintained after 127 according to the impression one draws from the stamps. This is demonstrated by the lack of individual stamps, by the introduction of a common stamp for both brick-yards (186), and by the appearance of three of Aburnius' former *officinatores* in the service of his more successful competitors: P. Servilius Firmus, who occurred in 123 in stamps 171-6 (cf. 177-8; 232-3), worked in 138 for Statilius Maximus (1456; the chronological position of 1425 of Seia Isaurica is not yet clarified), Vibius Pudens (182-3; cf. 41), and probably Q. Aburnius Celer (cf. above 170).

DOL. SUCC. (cf. 615)

*188 615/6 □ D·SVCCESSA *litt. cavis*
D(oliare) Successa(num).

BL II 147, 178 (151, 182) (Villa Adriana). The new stamp gives definitely this as the name of a type of brick so far known only as *Dol. Succ.* (615; cf. 612-3).

FIGLINAE TERENTIANAE (cf. 616-630)

189 622. The missing letters are AVRELI C. NS 1916, 419 (Ostia).

*190 628/9
 (cf. 1947)

○ OP·DOL EX PR C FVL PLAVT PR·PR·C·V·COS·
 II·FIG TER A L AEL·PHIDEL· a. 203-5
aquila alis expansis

*Op(us) dol(iare) ex pr(aedis) C. Ful(vi) Plaut(iani) pr(ae-
 fecti) pr(aetorio), c(larissimi) v(iri), co(n)s(ulis) II,
 fig(linis) Ter(entianis) a L. Ael(io) Phidel(e)*.

BL III 162, 164, 170 (294, 296, 302), Tav. C, Fig. 39 (Ostia);
 cf. the fragments 1947 and NS 1893, 69 (Rome).

FIGLINAE TONNEIANAE, VICCIANAE (cf. 631-673)

*191 634/5 ☉ EX FIG TONN AB APPIA

PYRAMIDI

Ex fig(linis) Tonn(eianis), ab Appia Pyramidi.

NS 1899, 201 (Rome); BL II 91 (95); cf. Cozzo, *loc. cit.* ad 53, Tav. 1, Fig. 2. In the later years of Trajan Appia Pyramis was in the service of Asinius Marcellus (854).

*192 640 ○ TVNN SEX·VISM·HIMER·

(corrected)

Tunn(eiana) Sex. Vism(ati) Himer(i).

Ostia 1938. The same *figulus* occurs in 1517 a, b *Sex. Vimati Hinieri*, where Dressel rightly remarked that HINIERI is written by error for HIMERI. 1517 should therefore be inserted between 640 and 641. Sex. Vismatius Himerus, like Sex. Vismatius Neritus (644, 42), is undoubtedly related to Vismatius Successus (1518-26; 397-401).

193 var. of 646 ☉? TEGLA DO . . . EX FIGLIN

IVLIAE ProcVLAE

Teg(u)la do[l(iaris)Ton(eiana)] ex figlin(is) Iuliae P[roc]ulae.

Pietrogrande, NS 1938, 401 (Via S. Basilio, Rome).

194 var. of 647 ☉ TEG·TVN DOL EVTICHVS·SE

IVLIAE·PROCVLAE

Teg(ula) Tun(eiana) dol(iaris), Eutichus se(rvus) Iuliae Proculae.

Crostarosa, NBAC IV (1898), 234.

*195 647/8 ☉ teG DOL TVN IVLIÆS PROCLÆS

EVTYCHVS SER FE

signum rotundum

[Te]g(ula) dol(iaris) Tun(neiana) Iuliaes Proc(u)laes, Eutychus ser(vus) fe(cit).

Ostia 1938.

- 196 655/6_I □ EX·FIGLINIS·PAETINÆS
TEGVLA·TÖNNEIANA
AQVILLIVS·FEC·☽.
EX·VICCIANIS·FIGLINIS

Gius. Gatti, *BC XX* (1892), 374 (Pasolina near Colonna). The fourth line is partially redundant. Paetina is identified by Gius. Gatti with Aelia Paetina, second wife of the emperor Claudius (Suet., *Claud.* 26-7), a very convincing suggestion. The same Aquillius occurs in 631 *Tegula Tunneiana*, *Aquillus f(ecit)*. The *tegulae Tonneianae* were a specialty produced in the *Figlinae Vicianae* (and occasionally elsewhere; see above 109), but some of Paetina's tiles had another name:

- 197 655/6_{II} Form: lower half circle VICCIANA
(like 660) (?) DE FIGLINIS·PAETINAE

*luna, stellae
palma*

Vicciana (sc. tegula) de figlinis Paetinae.

NS 1890, 111 (Orvieto). The same type of stamp is represented by 666 and 670, they all belong to the middle of the first century approximately.

- *198 var. of 657 Form: like that TONNEIANA·DE figLINIS
of 1290a. VICCIANIS
AC.

- 199 662/3 ☉ L·TONNEI DIO
TEGLA V

L. Tonnei Dio[nysi], Teg(u)la V(icciana).

Ashby, *PBSR III* (1906), 130. If Ashby's reading is right, stamp 632 may well have to be read *Tonnei Dionysi* instead of *Tonnei(ana) Dionysi*, in spite of 662; cf. 202.

- 200 663/4 ☉ L·LVRIVS·MYRINVS·FEC
IN·FIG·VIC·IVLI RV

duo rami palmae

L. Lurius Myrinus fec(it) in fig(linis) Vic(cianis) Iuli Ru(fi).

NS 1896, 162 (Rome). L. Lurius Myrinus is known from stamp 1252. He now joins Zosimus as a workman for L. Iulius Rufus, proprietor of *Figlinae Tonneianae* and *Viccianae*; cf. 633, 663-4.

201 var. of 1252 □ L LVRI (★

MYRINI

NS 1892, 348 i and 313 (Rome).

202 665/6 ☉ EX·FIGLINIS·VICCIANIS

(cf. 1846) C·TONEI·QVADRATI

NS 1911, 43 = CIL XIV S 1, p. 755 (Ostia); cf. the fragment 1846 (Ferentino). Like 199, this stamp proves that the *Figlinae Tonneianae* derived their name from a Tonneius and that in all probability the *Figlinae Viccianae*, named after C. Viccius (1510-2), are earlier than the *Figlinae Tonneianae*. Members of the family of the Tonnei seem to have worked in the *Figlinae Viccianae* before they established themselves, perhaps after inventing some sort of improvement in the production of bricks. It is noteworthy that while bricks from the *Figlinae Viccianae* frequently occur as early as Nero if not earlier, the term *Figlinae Tonneianae* is found only toward the end of the first century or later: 635, 642, 644, 652-3 — with the one exception of 661. A clarification of the still rather obscure relations between the two *figlinae* will be possible only if the early stamps of these brick-yards can be dated more precisely.

	Form: lower	NVICCIA	NVICCIA
203	672 half circle	1) NITGLI <i>ap</i>	2) TGLI·EP
	(like 660)	STATI M...	STATI·M·AN...
		3) STATI·M·ANTIO...	
		IN·FIGL	
		...CIAN	

1: 672 (De Rossi 1869). 2: Thomas Ashby on the margin of his copy of CIL XV 1 ad 572 ("Aurelian wall near Porta Pinciana . . . being demolished Dec. 1907"). 3: NS 1907,

12 (Vaglieri, tombs on Via Salaria). Whether the three fragments represent three (or two) varieties or one type cannot be decided. The IN in 3 is rather suspicious. Read:

Stati M(arci) Antio[chi], de (and in) figlin(is) [V]icciānis.

- 204 var. of 673 ☺ VICCIAN
Vicciān(a).
 NS 1894, 404 (Rome).

FIGLINAE VIA NOMENTANA (*cf.* 677–682)

- *205 var. of 677 ☐ FLAVI POSIDONI
 NO·ET APRONI·COS

a. 123

AC. This fragment cannot be combined with the only known fragment of 677 d which also is preserved in AC where I could examine it.

(OFFICINA) DE VIA SALARIA (*cf.* 683)

- *206 683/4_I ☉ IVLIVS·FELIX DE·SAL·DE PR
 IVNI RVFI·ET R C·

Iulius Felix de (via) Sal(aria), de pr(aedis) Iuni Rufi et R. C(ap.).

Ostia 1938 (3.ex.). The new stamp discloses the name of one of the two owners of the brick-yard until now known as Iunius R.

(OFFICINA) VIA TRIUMPHALI (*cf.* 684)

- *207 683/4_{II} VERO III AMB COS EX *litt. cavis* *a.* 123
 (cf. 1256) PR LVSI MOD VIA TRIV

Ex pr(aedis) Lusi Mod(esti), Via Triu(mphali).

AC, published *BL* III 194 (326) n. 265. 1256 like 1255 (dated in 123) will have to be transferred to the bricks from the Via Triumphalis.

LATERES IMPERATORUM (cf. 691-774)

*208 690/1 ☉ ^{palma}_{sinistrorsum} SEX·VIBI ARI EXPECTA
D·F·CÆ

Sex. Vibi Ari., Expecta(ti), d(e) f(iglinis) Cae(saris).

A. M. Colini, *BC LXX* (1942), 45 no. 15 (Temple of Veiovis), to whose kindness I owe a photograph of the stamp. Previously known examples are poorly preserved: *BL I* 191 (51) no. 57 (Mercati di Traiano) (to be corrected accordingly). Another copy was found in Piazza Montanara in 1938; cf. also the fragment *SPASR I*, 48 no. 196, pl. II 7 (now AC). This stamp used by Expectatus, slave of Sex. Vibius Ari., comes from the emperor's brick-yards. The interpretation *d(e) f(iglinis) Cae(pionianis)* or *Cae(lianis)* is unlikely. The main argument for the explanation given here is that in the Mercati di Traiano the stamp was found with copies of 811 d *Doliare Anterotis Severi Cae. = Anterotis Severi(ani) Cae(saris servus)* where the same ambiguous abbreviation is used; cf. also 542-3, 545, 710, 813.

*209 703/41 ☉ EX PRAED·MATIDIAE AVG·F·OFIC
CLAVDI·FORTVNATI

protome Minervae sive Martis dextrorsum

Ex praed(is) Matidiae Aug(ustae) F. of(f)ic(ina) Claudii Fortunati.

Ostia 1938. The following stamp may be identical with 209:

☉ EX PRAED·MATIDIÆ AuG ex FIG
CLAVDI FORTVNATI

"testa di Mercurio"

Vaglieri, *NS* 1909, 238 = *CIL XIV S I*, 5308, 2 b (Ostia). Cf. the following stamp.

210 703/411 ☉ EX PRÆD MAT AVG F////////IC
CLAVD·FORTV

"testa di Mercurio"

Vaglieri, *NS* 1909, 167 b = *CIL XIV S I*, 5308, 2 a (Ostia). The text is probably the same as of the first variety. The

meaning of F in line 1 is not clear. It may stand for *f(igli-
narum) ofic(ina)*, or, by error, for *e(x)*, which one would
really expect; cf., e.g., 10. Matidia became Augusta not later
than 107/8 and died in 119 (*RE* XIV 2, 2199, 2201). She was
the niece of Trajan and through the marriage of her second
daughter Sabina (cf. above 144) the mother-in-law of Had-
rian, who held the famous *oratio funebris* *CIL* XIV 3579 in
her honor (cf. P. J. Alexander, *HSCP* XLIX (1938), 169).

*211 704/5 ☉ EX PRAE·CAESAR·M
CAL PAE ET APRON
SOQ

Ex prae(dis) Caesar(is), M . . . Cal.

AC. The nomen gentile of the *officator* is lacking.

*212 713/4 ☉ Q·MANI VERECVNDI
(cf. 2068) FIG FAVSTINÆS
corona

Q. Mani Verecundi, fig(linis) Faustinaes.

Ostia 1938. A tiny fragment of the same stamp is 2068
(Rome). The stamp belongs to the wife of Antoninus Pius
before she received in 138 the title *Augusta*; cf. 714.

*213a 714/5_a L VALLI P. . . . *litt. cavis*
. The following stamp is in mirror writing:

*213b 714/5_b L VALL PR *litt. cavis*
L. Valli P[roc(li)].

Ostia 1938. Stamp of the *officator* of Faustina, who is men-
tioned in 714.

214 723 ☉ EX PREDIS FAVSTINES AVG
(completed) F SIMILI *v. 2 linea recta*
S

Ex predis Faustines Aug(ustae), f(ecit) Similis.

NS 1907, 12 (Tombs on the Via Salaria).

*215 735/6

☉ EX·FIG L·AELI OP·DO PRÆS·ET RVFIN COS
NVNNIDIÆ SPERAT a. 153

D F P v. 3 *linea recta*

Ex fig(linis) L. Aeli, op(us) do(liare), Praes(ente) et Rufin(o) cos., Nunnidiaae Sperat(ae), D. F. P.

BL III 139, 141 (271, 273); I, Tav. B, Fig. 11 (Ostia). A fragment of the same stamp was found in Carthage: Delattre, *Rev. tunis.* VIII (1901), 35 no. 101. The stamp 735, dated in 150, of the same L. Aelius Aurelius Commodus, who later became the emperor Verus, is particularly frequent in Carthage.

216 736/7 ☉ EX PR L AVRELI OPus doLI

C NVNNIDI FelicIS

aper dextrorsum currens

Ex pr(aedis) L. Aureli, op[us do]li(are) C. Nunnidi F[eli]cis. Crostarosa, *NBAC* III (1897), 227 no. 58. This stamp confirms that C. Nunnidius Felix was in the prince's service already before the latter became Augustus. In 738 the same *officinator* combined the indication of the ownership of the *praedia* with that of the consulship of his master (in 154; cf. *BL* III 141 (273) n. 204). 737 belongs to the period when L. Aelius had become the emperor Verus.

*217 743/4 ☉ OP DOL EX PRAED M AVRE

LI ANTONINI AVG N

avis alis expansis sinistrorsum

Op(us) dol(iare) ex praed(is) M. Aureli Antonini Aug(usti) n(ostri).

BL III 155 (287) no. 63, 167 (299); I, Tav. B, Fig. 12 (Bath of Caracalla). Another example of this stamp is in AC. The emperor is of course Caracalla.

LATERES PRIVATI (cf. 775-1539)

218 789/90 ☐ L ALFI RVFI

SATVRNI

SPASR I 56 no. 229.

- 219 797/8 ☉ M·ANNI·ONESIM
NS 1908, 264. Stamp of a freedman of M. Annius Verus; cf. *BL* III 76 (208).
- 220 798/9 ☉ or ○ M·ANNI·THOANTIS
ramus palmae
NS 1892, 314, 478 (Rome). Stamp of a freedman of M. Annianus Verus; cf. *BL* III 76 (208).
- *221 800/1 ☉ M *Fab*I LYCHIMN EX AN
 VE AP ET PA a. 123
 COS
*M. [Fab]i Lychimn(i), ex (praedis) An(ni) Ve(ri), Ap(roni-
 ano) et Pa(etino) cos.*
BL III 66, 73, 76, 189 (198, 205, 208, 321) (Ostia).
- *222 var. of 806d ☉ PAETIN·ET APRONIAN·COS a. 123
 ZOSIMVS·M·A V S
Zosimus, M. A(nni) V(eri) s(ervus).
NS 1903, 226 (Rome); *BL* III 67 (199) (Ostia).
- 223 815/6_I □ ANTONI·FELICIS
 (cf. 2042)
NS 1907, 129 (Lanuvio). This may be an incomplete copy of one of the two following stamps.
- 224 815/6_{II} □? L·ANTONI FELICIS
 (cf. 2042)
 Paribeni, *NS* 1926, 299 (Rome), erroneously called this stamp a "variante" of the following one.
- 225 815/6_{III} □ M·ANTONI FELICIS
 (cf. 2042)
NS 1906, 430 b (Rome). The same man occurs also in the stamps *NS* 1910, 166 (on a *pelvis*) and 2543 (on a terracotta relief). The fragment 2042 belongs to 223, 224, or 225.
- 226 var. of 823 ☉ or ○ SEX·ANVF IVb..?
Sex. Anuf. Iu. . . . (?)
NS 1893, 431 (Rome).

- 227 823/4 APRON ET PAE COS *litt. cavis* a. 123
(cf. 1880) □ APOLLONI □

NS 1907, 542; 1916, 312; cf. the fragm. 1880; BL III 67, 74-5 (199, 206-7). Found in Rome and Ostia. This stamp comes from the *Praedia Quintanensia* of M. Annius Verus; see above p. 31.

The following stamp is in mirror writing:

- 228 var. of 826 APPI *litt. cavis*
 BRA

Appi Bra(duae).

NBAC II (1896), 74 no. 80.

- 229 828/9 ○ M·ARISTI·EVSCEMI *fo-
lium*
NS 1891, 316 (Rome).

- *230 831/2 □ A·ARISTi
 MENANDRi

Ostia 1939. This stamp seems to be prior to 123.

- *231 835/6 □ M·ARRI·DIOGEN
NS 1906, 430 a. AC (fragment).

- 232 838/9_I ☉ EX PRAedis ARRIAE CAE
 SENNIAE PAVLIN

NS 1892, 115 d — unless this is a badly read copy of 838.

- *233 838/9_{II} □ ARRIAE

BL III 125 (257) no. 34 (Villa of Sette Bassi). Certainly not Arria Fadilla; perhaps a stamp of Arria Caesennia Paulina, and this would fit chronologically: *ex figlinis* ARRIAE

Caesenniae Paulin cf. 838.

- 234 838/9_{III} □ L ARRVENTI

Vaglieri, NS 1913, 177 a (Ostia), prints this stamp as if it were complete. Cf. the fragments *Mon. Ant. dei Lincei* XIII (1903), 173 (Pratica di Mare); NS 1910, 515 (Ostia) and *Rev. tunis.* XII (1905), 433 no. 38 (Carthage).

- 235 848/9_I ☉ EX·FIG Q A MARC·.....
Q·ARTiC·..... a. 123
COS
Carcopino, *Mél.* 1909, 359 (Ostia). While the restoration of this stamp is uncertain in details, it is clear that it is closely related to 848. Cf. 236.
- 236 848/9_{II} ☉ EX·FIC Q·ASINI·MARC·OP DOL·C N F
PAETINO ET APRONIAN a. 123
SOC
*Ex fig(linis) Q. Asini Marc(elli), op(us) dol(iare) C. N(un-
nidi) F(ortunati).*
NS 1893, 360.
- 237 85_I ☐ OP DOL·EX F
Q·A·M·GRAP
SER·APRON CO a. 123
*Op(us) dol(iare) ex f(iglinis) Q. A(sini) M(arcelli),
Grap(h)i(ci) ser(vi).*
NS 1898, 242b.
- 238 854/5 ☉ Q ASINI MARCELLI
CA//O////
NS 1913, 236 (Ostia). Stamp of an *officinator* of Marcellus who is hitherto unknown.
- 239 859 ☉ ASINIA F MARCELLI FL
(completed) *anulus quasi quidam extans qui occupat
spatium versus secundi, in medio*
PR
NBAC III (1897), 237 no. 116. Cf. Dressel's comment on 858, which also starts ASINIAF MARCELL, probably an error for ASINIAE. Fl. Pr. may be Fl(avius) Pr(obus), who was in 135 in the service of Domitia Lucilla (1054-5).
- 240 872/3 ☐ ATIMETI II CÆSAR F
Atimeti (duo) Caesar(is sc. servi) f(ece)runt.
Ashby, *PBSR* V (1910), 268.

241 var. of 887 ☉ L·VELICI·SOLLER
 NS 1912, 351; cf. CIL XIV S 1, p. 756 (Ostia); BL II 176 (180).

*242 var. of 895 ☐ M·CÆCILI ↓ HISPANI
 Ostia 1938.

243 901 ☐ C CALPETAN
 (completed) CRESCENTIS
 NS 1938, 403 f. and Fig. 34, on a *dolium* (Via S. Basilio, Rome). The same stamp had previously been found on a *dolium*: NS 1896, 327 (Rome, complete).

*244 var. of 904 ☐ HERMETIS.
 C CALPETA·FAVOR
 Piazza Montanara, Rome, 1938. The new variety is closely related to 904 f.

245 908/9 ☐ MESOBI CALPVRNI
Mesobi Calpurni (ae?) (sc. *servus*).
 NS 1926, 305.

246 909/10. ☉ L·CALPVRNI·CLADI
nux pinea inter duos ramos
 NS 1890, 155; 1891, 315; 1892, 348 d.

*247 var. of 910 ☉ ^{palma} _{sinistrorsum} M·CAL·PHRONIM ^{palma} _{dextrorsum}
 NS 1896, 391. AC.

*248 910/I_I ☉ L CALPVRNI SERVANDI
 BL I 203 (63).

*249a 910/I_{II} Form: crescent with the horns squared off (like 980). CALPVRNIÆ CORVI
 NI

*249b 910/I_{III} ☐ CALPVRNIÆ
 CORVINI.
Calpurniae Corvini (sc. *uxoris*).

NS 1889, 186 (found together), now AC.

*250 922. The last two words in line 1 read FRVCTI SEX. *BL I* 192 (52) no. 94. Another copy in *AC*. 922 is the stamp 923 after the interior line had been destroyed. Cf. 9 and 32.

*251 928/9 CLA GOB SAX P *litt. cavis*
Cla(udi) Gob(athi), Sax. P(o.).
 Ostia 1938-9. Cf. 252.

*252 929/30 CLA GOB VOL *litt. cavis*
Cla(udi) Gob(athi), Vol(usiani).
 Ostia 1938; cf. *NS* 1901, 5 (Isola del Giglio); 1909, 129 e (?); 1913, 182 a, b, 216 (Ostia). *AC. NS* 1910, 290: C LAGO SVL seems to be the same stamp misread. Volusianus was known from 929; Sax. P(o.) seems to have worked also for a certain M. Ver. (2210). On Claudius Gobathus whose bricks belong in the time of Trajan, cf. *BL I* 206 (66).









*253 933/4 ☉ ^{*palma*}_{*sinistrorsum*} TI CLAVDI TYRANNI ^{*palma*}_{*dextrorsum*}
SPASR I 56 no. 231, pl. II 18. Now *AC*.

The following stamp is in mirror writing:

(*) 254 940/1 □ CLODI OLYBRIV
Clodi(us) Olybriu(s).
SPASR I 54 no. 224, pl. II 8. The editors read CLODIO LYBIO/V. My reading is based on the illustration.

*255 945/6 ☉ OP DOL COMINI EVCHERI
aquila alis expansis
AC. According to its form (small orbiculus like 157), the stamp seems to belong to the end of the second century.

*256 950/I_I ○ L·CORNELIVS·NIG VER
avis sinistrorsum; signum rotundum
L. Cornelius Niger, Ver(na?).
 Cozzo, *loc. cit. ad* 53, Tav. XL, Fig. 130. Ostia 1938 (fragm.).
 My reading is based on Cozzo's photograph.

- *257 950/I_{II}  L·CORNELI·NIGR
avis
 Ostia 1938. I saw another copy in the Museo Nazionale delle Terme.
- *258 951/2_I  EX·FIG·CORNELI·PRISCI
protome Mercurii dextrorsum
 AC. Cf. 951-2 and 259.
- *259 951/2_{II}  or L·CORNELI PRISCI
 AC.
 954; cf. above 125.
- *260 957/8  EX·FIG L·CVSINI·MESSALLI
 GLAB·ET·TORQ·COS *a. 124*
 BC XLIII (1915), 58, now AC. Another copy was found in Ostia 1939. On L. Cusinius Messallinus cf. *BL* III 194 (326).
- *261 964/5  *palma sinistrorsum* C·CVRIATI·ATICTI *palma dextrorsum*
C. Curiati Aticti.
 AC. Undoubtedly a freedman of C. Curiatius Cosanus, owner of *Figlinae Caepionianae* (cf. 96 ff.; 34-8).
- *262 966/7  METRA·QVRTRI
Metra() Qurti (= Curti).
 AC. The same man is known to us, after having been freed by his master, under the name M. Curtius Metra() (965). The new stamp shows that — against Dressel's opinion — the master of Antiochus (966) and Philocles (967) was not M. Curtius Metra(), but that Metra() himself originally had been a fellow worker of these two slaves. Their master M. Curtius is undoubtedly the man after whom the *Figlinae Curtianae* (144-7) are named. The stamp may well belong to the first century B. C.
- 263 var. of 970  CVSPI·DEMETRI
Cuspi Demetri.
 BC XXXIV (1906), 330. The stamp gives the whole cognomen of this *figulus*.
 978; cf. below 303.

- *264 978/9 □ SEX·DOL
GALLI *ramus palmae*
dextrorsum

BL III 67 (199) (Ostia). The stamp had been previously found in Utica: *CIL* VIII S 3, 22632, 57, where Cagnat wrongly reads DOT, Héron de Villefosse rightly *Sex. Dol(utii) Galli*.

Lateres gentis Domitiae (cf. 979–1120)

- 265 var. of 980 Form: like that of 980 DAMA·DO·AF
Dama Do(miti) Af(ri).

NS 1895, 395; 1932, 286 (First ship of Nemi); cf. *BL* III 87 (219). Dated certainly before 41 A.D., not after 59 A.D.

- *266 984/5 Form: lower half PARIDIS·CN·DOMITI
circle (like 53) IRIIV

Paridis Cn. Domiti Afri.

SPASR I 40 no. 154, pl. II. 5; *BC* XXXVI (1908), 90. AC. Dated before 59 A. D.

The following stamp is in mirror writing:

- 267 var. of 987 Form: shallow DVO DOM
horse-shoe

Duo(rum) Dom(itiorum).

Delattre, *Rev. tunis.* XII (1905), 430 no. 32 (with a drawing) (Carthage). 60–93 A. D.

- *268 990/1 □ APOLLONI ET
ramus palmae ISMARI CN CN *ramus palmae*
DOMITIIVRM

Apolloni et Ismari Gn(aeorum) Domitiorum.

BL I 184–5 (44–5). This stamp, previously found on a *pelvis* in Pompei (*CIL* X 2, 8048, 7), was discovered by me on bricks in the Domus Aurea dated about 64–8 A. D.

- *269 var. I of ○ CALLISTI DV·DOMITIIVRM
992
AC.

- *270 var. II of ○ CALLISTI DOMITI^{OR}V
992
AC.

- *271 992/3 ☉ CALLISTI DAPHNI DOMITI^{OR}
in orbiculo: protome Mercurii dextrorsum
Callisti, Daphni Domitior(um) (sc. servorum).
NS 1900, 626; now AC. Callistus appears alone in 992, Daphnus in 995. Dated between 60 and 93 A. D.

- 272 1001/2 “bollo VITALIS
circolare” DVOR·DOMITI^{OR}·TVLL
G. Bendinelli, *Mon. Ant. dei Lincei* XXVIII (1923), 430 (Monumentum Aureliorum). Bendinelli seems to have copied the interior row before the exterior. That Tullus’ name precedes his brother Lucanus’ should be noted as a unique exception. Vitalis is hardly identical with the workman of Cn. Domitius Trophimus (1120).

- *273 1010/1? □ T DOMIT
(formerly 1942) . . . LuCILL S F
AC. Dressel read the second line of the same copy: . . . CILIS F (without comment). But the second L seems to me certain. Although the name of the slave in line 1 remains hypothetical, it is tempting to think of Faustus (cf. 1005, 1010, 1011, 1034) and to complete the stamp as follows:
[Faus]t(us) Domit(iae) [Cn. (or P.?) f(iliae) Lu]cill(ae) s(ervus) f(ecit).

- 274 1019/20 ○ EX·PR·DOM LVCIL·FortVNATI
quadrupes dextrorsum currens
Ex pr(aedis) Dom(itiae) Lucil(lae) [Fort]unati.
NS 1909, 208. On Fortunatus, workman of Domitia Lucilla, cf. *BL* III 134, 142 (266, 274).

- *275 1035/6 ☉ D·PR·D·P·F·LVCILLAE ^{palma}
HELENVS·SER ^{dextrorsum}
D(e) pr(aedis) D(omitiae) P. f(iliae) Lucillae, Helenus ser(vus).
NS 1894, 278; Fornari, *NBAC*, n. s., VI (1929), 30; a third example was found in Ostia: *BL* III 214 (346).
- *276 1039/40 ☉ A PONTI CLOdiani eX PRAE D P F L
TITIANO et GALLICA a. 127
SOO
A. Ponti Clo[diani e]x prae(dis) D(omitiae) P. f(iliae) L(ucillae).
BL II 149 (153), III 150 (282) (Villa Adriana); cf. above 146.
- 277 "1052/3_I" ☉ M·PR·DOM·LVC·OP·D
(in reality 1052) /////VLVS
Under this form Ashby published a stamp from Nazzano (now in S. Paolo fuori le mura?): *Mem. Pont. Acc.* I 2 (1924), 147. M in the beginning of line 1 is obviously misread for EX and in line 2 one does not expect a name in the nominative. Upon closer inspection there can be little doubt that this stamp is a hurriedly copied example of 1052.
- *278 "1052/3_{II}" ☉ LVCILLAE VERI FIG
(in reality 617) PONTIANO Et Atiliano cos. a. 135
In this form Vaglieri edited the fragment of a stamp as unpublished in NS 1913, 218 (Ostia), without commenting on it. If this text were right it would change the established chronology of the later years of *Domitia P. f(ilia) Lucilla*, the mother of Marcus Aurelius. For according to previously known stamps, she is first called *Lucilla Veri* (sc. *uxor*, after her late husband Annius Verus) in 145 (1071). She is called *P. f(ilia)* on a stamp for the last time in 139 (1061). Whatever were the property arrangements between the two *Domitiae Lucillae*, they probably found expression in the trade marks used on their bricks. But whether the indication *P.*

f(ilia) — which undoubtedly distinguishes the bricks of the younger Lucilla from those of her mother — was used consistently, is a problem not yet solved and not to be treated here (cf. Dressel, *CIL* XV 1, p. 271, whose arguments in favor of placing the elder Lucilla's death in 123 can all but be disproved). Still, it had been pretty safe to consider all undated stamps referring to *Lucilla Veri* roughly dated in the period 145–155, until the present document was discovered. I drew the necessary conclusions from it *BL* II 161–2 (165–6) and am glad to be able to withdraw them here. For Vaglieri's stamp is only a misread fragment of 617

EX PR LVCILLAE VERI FIGVLINIS
TERENTIAN OPV L.S.F

Ex pr(aedis) Lucillae Veri, figulinis Terentian(is), opu(s) L. S. F.

This stamp belongs exactly in the period 145–155; cf. *BL* III 134 (266).

*279 1056. Form: ☉. AC (complete example).

*280 1064/5 ☉ OP DOL EX·PR·DOM LVC APRILIS
PONTIANO ET ATILIANO a. 135
COS

Op(us) dol(iare) ex pr(aedis) Dom(itiae) Luc(illae), Aprilis. BL III 138 (270) (Ostia); 215 (347) (Villa Adriana; fragm.); cf. the fragment *NS* 1912, 388 (Ostia). AC.

*281 1077a. Form: ☉. There are punctuation points before and after TI in line 1. *SPASR* I 44 no. 168. AC.

282 1092 ☉ EX·PRAE·DOMIT·LVCILLE
(completed) FIG·CAL LIBERAL

nux pinea foliis circumdata

Ex prae(dis) Domit(iae) Lucill(a)e, fig(linis) Cal. Liberal(is).

NBAC II (1896), 59; cf. the fragment *NS* 1903, 286.

- 283** var. I of ☉ CN DOMITI·ARIGNOTI
 1094 *aquila alis expansis*
NS 1900, 618 no. 3 (Isola di Giannutri).
- *284** var. II of ☉ *palma* CN DOMITI·ARIGNOTI *palma*
sinistrorsum *dextrorsum*
 1094 *quinque stellae inter cornua lunae crescentis*
 (cf. 1099)
NS 1908, 249 (Ostia); *BL* III 93 (225) (Ostia).
 This stamp can be identified with Dressel's fragment 1099 which he completed to Cn. Domiti [Ismari], referring to Ismarus' stamp 983a on account of the sign in the center. But 983a has only one star, whereas 1099 exactly agrees with the stamp here published. In addition, Dressel's suggestion is untenable also for chronological reasons. Cn. Domitius Ismarus has to be removed from the list of freedmen of the Domitii.
- *285** var. of 1097g. Same stamp, but AMANDI instead of AMAND. *BL* III 97 (229) (Ostia).
- *286** var. of 1102 ☉ CN DOMITI CLEMENTIS
protome Minervae sinistrorsum
 AC.
- *287** 1115c. Dressel's restoration is confirmed in *NS* 1908, 266 and by a copy in AC.
- *288** 1119. Form: ☉. AC.
- *289** 1126. Form: ☉. Ostia 1938-9.
- 290** 1136/7. Same stamp as 1136, but with an M in the center. *NS* 1892, 409.
- *291** 1137/8 ☉ APRON·ET·PAET·COS *a. 123*
 FELICIS
NS 1897, 453; 1906, 121; AC.
- *292** 1140/I₁ APRON ET PAE COS *litt. cavis*
 □ FELIX·C □ *a. 123*
BL III 67, 73-5 (199, 205-7) (Ostia). This stamp comes

from the *Praedia Quintanensia* of M. Annius Verus; see above p. 31.

- 293 1140/I_{II} FESTI *litt. cavis*
 NS 1932, 286 (First ship of Nemi); Ashby, *PBSR* I (1902), 246: /EST/ (between Prata Posci and *Ad Quintanas*). About 40 A. D.

- *294 1151 ☽ T FLAVI EVCRHI *sic*
 (completed)
SPASR I 46 no. 179, pl. II 9; now AC where I have also seen Lanciani's copy (or a similar one) of 1151. The reading given here is certain; cf. 1150.

1155; cf. below 339.

- *295 var. of 1156 ☉ C FLAVI SECVNDI *palma dextrorsum*
BL III 97 (229) (Ostia). Vaglieri, *NS* 1911, 404 (Ostia), gives apparently the same stamp in two lines, which strikes me as incorrect.

- *296 1156/7 ☉ EX·FIG·FLAVIAES·PELAGIAES
 (cf. 2012) PAE·ET·APR·COS *a. 123*
NS 1892, 409; 1893, 360. *BL* II 131 (135) (Villa Adriana); 181 (185) (Villa Le Vignacce); cf. the fragments 2012 and *SPASR* I 54 no. 221.

- *297 1158/9 ☉ EX·FIG·FLA PRO DOL·SERMAS
 PÆTINO ET APRONIAN *a. 123*
 COS
Ex fig(linis) Fla(viae) Pro(culae), dol(iare) Ser. Mas. (? hardly Sermas).
BL II 150 (154) (Villa Adriana). In *Sermas* the third and the last letters are doubtful.

- 298 1160/I_I "rettilineo" P·FOLI
BC XXIX (1901), 95.

299-310 *Stamps of M. Fulvius and his workers.*

- 299 1160/I_{II} □ ANTIOCVS
FVLVI·M·SER

Antiochus, Fulvi M. ser(vus).

Based on two fragments NS 1890, 20 and 1891, 317.

- 300 After Antiochus was freed by his master, he appears on bricks (1161) and *dolia* (2443) as M. Fulvius Antioch(us).

- 301 Only on *dolia* occur: *Castricius et Rodo Ful(vi)* (sc. *servi*) (2444) and

- *302 *Diagiza, M. Fulvi s(ervus) f(ecit)* (2445). AC.

- 303 978 □ DIONYSIus
FVLVI·M SER
Dionysi[us], Fulvi M. se[r(vus)].

- 304 1894 □ . . ICELADVS
M FVLVI SER

. . . *iceladus, M. Fulvi ser(vus)*.

BC II (1874), 222. Not seen by Dressel. The name of the slave may be corrupt; but Celadus does exist as a name.

- 305 1160/I_{III} □ MYRO·M·FVL·SER·F
Myro M. Ful(vi) ser(vus) f(ecit).

NS 1901, 420 and 1938, 261, where Paribeni wrongly reads SERE; another fragment NS 1913, 182 (Ostia).

- 306 1160/I_{IV} □ NICOLAVVs
bucra-
nium FVLVI·M SER

Nicolavu[s] Fulvi M. se[r(vus)].

NS 1911, 94 with ill. on p. 93 (Ostia) = CIL I² 2314 = CIL XIV S 1, 5308, 26.

- 307 1358 □ PHILEROS
M·FVLVI·SER

This stamp was also found on a *dolium* in Pompei, CIL X 2, 8047, 15.

308 1160/1_V □ SOSVMVS
FVLVI·SER

Sosumus Fulvi ser(vus).

NS 1922, 411 no. 9. Stamp on a sarcophagus. Sosumus (= Zosimus), like his colleague Antiochus, was freed, and appears in the time of Caligula in the following stamp.

309/10 1164/5_I □ M·FVLVIVS
ZOSIMVS·F (Z in mirror writing)

M. Fulvius Zosimus f(ecit).

NS 1895, 395g and 1932, 286 (First ship of Nemi) and elsewhere, also in Ostia; cf. my discussion of this stamp BL III 88-9 (220-1), where I had not yet recognized his former connections with M. Fulvius. This M. Fulvius must have been one of the leading brickmakers of the time of Augustus and Tiberius. Even then he produced not only for Rome but also for Ostia, and made besides roof tiles (rather than bricks), also all sorts of clay vessels which were exported as far as Pompei (cf. 307). This shows the importance of the brick industry in Rome already in the early Empire.

*311 1162/3 ☉ EX PRAED FVLVI PLAVTIANI FIGLIN
ATOR APPIVS BENERIVS

leo sinistrorsum currens

Ex praed(is) Fulvi Plautiani, figlinator Appius Benerius.

NABC IV (1898), 234 (Rome); NS 1916, 426 (Ostia); cf. BL III 162 (294) no. XIV; 163 (295) (Ostia). The word *figlinator* is an addition to the *Thesaurus*.

*312 1164/5_{III} □ PRIMIGENIV
FVLVIÆ·SECVND

Primigeniu(s) Fulviae Secund(ae or -illae).

AC. First century.

*313 1165/6 A FVNDI HELLEN

Λ·V·E *litt. cavis*

A. Fundi(li) Hellen(is?), *A. V. E.*

BL II 117 (121), 167 (171) n. 139.

- *314 var. of 1167 □ P. FVRIVS.
ALBANVS. **FE**
[P.] *Furius* [A]lbanus *fe(cit)*.
AC. First century.
- 315 1170/1 ○? SEX GAVI·SARINI
NS 1926, 305.
- 316 1171/2 □ <sup>ampho-
ra</sup> Q·GRA·APOL <sup>si-
strum</sup>
Gius. Gatti, *BC* XXIX (1901), 133 (ill.); cf. *NS* 1901, 353.
Gatti considers the stamp as belonging to the end of the Re-
public or the beginning of the Empire.
- *317 1176 □ C·HEL V ACI
(completed) MALLI·TROELI
C. Helvacii Malli, Troeli.
Ed. Gatti, *BC* LIII (1925), 303; the same copy is now in AC.
Troelus (= Troilus) is the workman of C. Helvacius Mallus.
- *318 1204/5 □ C·IVLI·GORG
BL III 89 (221); cf. *NS* 1936, 50.
- 319 1207/8 □ SEX IVLIVS
PRISCVS FEC
NS 1892, 420; cf. *BL* III 122 (254).
- *320 var. of 1209 ☉ OPVS DOL EX P C IVL STEPHAN
ASIAT II ET AQVIL COS *a. 125*
NS 1908, 324 (Rome), Now AC.
- *321 var. of 1212b. *In orbiculo: protome Mercurii cum caduceo;*
otherwise like 1212b. Ostia 1938.
- *322 1216/7 ☉ EX P IVLIÆ ALB OF PRIMIGE
APR ET PAET COS *a. 123*
Ex p(raedis) Iuliae Alb(anae), of(ficina) Primige(ni).
BL II 68, 71 (200, 203) (Ostia).

- 323** var. of 1219 ☉ O FG EX PR IVLIA SATVRNI
IMP·CÆ·ANT C B P̄ a. 139

NS 1937, 19. (For a transcription cf. 1219).

- 324** 1224/5 ☐ C·IVNIVS
DIOGENES

NS 1933, 250 (Rome); cf. the fragment NS 1910, 436 = CIL XIV S 1, 5308, 29 (Ostia).

- 325** 1226/7 ☐ PAE ET APRON COS a. 123
eX PR IVN SVLPIC

[E]x pr(aedis) Iun(i) Sulpic(iani).

V. E. Gasdia, *La casa pagano-cristiana del Celio*, Roma, 1937, 673. This is a very poor source, but the stamp is not reported elsewhere. Whether it is impressed or not, is not said.

- *326** 1227/8 ☐ PÆT ET APRON·COS a. 123
EX PR IVN S P CL CH·HERC

Ex pr(aedis) Iun(i) [S(ulpiciani)?], P. Cl(odi?) Ch., Herc. BL III 68, 72 (200, 204) (Ostia, fragments of the right side). Two other fragments were found in Ostia 1938. They virtually complete the stamp, although some letters of the second line remain doubtful. Cf. 325, 327-8, and the comments on 328.

- 327** 1229/30 C IVN SVL litt. cavis
C. Iun(i) Sul(piciani).

NS 1904, 443; cf. BL III 72 (204). But since this stamp occurs on a lamp, the identity with the Iunius Sulpicianus in 1227-9, 325-6 is very unlikely.

- *328** 1230/1 ☉ TI CLAVD HILAR EX PR CAS
SECVND HERCL
PIL

Ti. Claud(i) Hilar(i), ex pr(aedis) Cas(si) Secund(i) Hercl. pil.

BL III 63, 72 (195, 204) (Ostia). The new stamps 326 and 328 exclude Dressel's explanation for the word her. = her(edum) in this group of stamps (1227-30). My attempt

(*loc. cit.*) to reconcile the new findings with his opinion does not hold. It seems very likely that *Herc.* in 326 and *Hercl.* in 328 refer to the name of Hercules instead. Then it may be read in 1230 *a pil(a) Her(culis)*. Cf. the similar names *ab pila alta* (1111), *ab Isis*, *ab Neptuno*, *ad Mercurium felicem*. In 1227 and 326 we would have only *Her.*, or *Herc.*, in 328 and 1229 *Hercl. pil.* or *Her. p.*, in 1230 and 1228 *a pil(a) Her.* or *pila Her.* That is to say that these enigmatic words denote the name of *praedia*: *Praedia a pila Herculis*. They belonged to Iunius Sulpicianus (1227-9, 325-6) (three *officinatores* of whom are known: P. Cl(odius) Ch. (326), Fla. Mag. (1227), C. Petronius Tranquillus (1228)), and to C. Cassius Secundus, who appears alone in 917 (as Iunius Sulpicianus does in 325) and with Ti. Claudius Hilarus in 328 (cf. 1230).

- *329 1234. Form: ☉. *ramus palmae* also at left. Otherwise correctly reported by Lanciani. AC.

var. of 1252; cf. above 201.

- 330 1254/5 ☐ C LVSIENI·HIL
C. Lusieni Hil(ari?).

NS 1907, 90 (Rome); 1910, 29 e (Ostia, fragm.). This stamp can be identified with a fragment found on the level of the Pantheon of Agrippa and reported by Hülsen, *Röm. Mitt.* VIII (1893), 317 (cf. *BL* II 108 (112) where I had not yet been able to suggest any identification):

//VSIENI·I/////

This stamp belongs therefore in the period about 30 B. C. The brick from the Pantheon is one of the very scarce remnants of Agrippa's original construction.

1256; cf. above 207.

- *331 1258 ☉ DOLIAREM
(completed) L M I

BL I 164 (24), Tav. B, Fig. 7, II 156 (160) (Villa Adriana).
Prior to 124 A. D.

- *332 1263/4 ☉ VLPIVS ANICETIANVS F
(cf. 2009) SERVIANO III COS a. 134
corona lemniscata

F = *f(ecit)*. AC, cf. *BL* III 195 (327) n. 265a and 2009. In 134 Ulpus Anicetianus was in the service of L. Manlius Theocritus (1263). Later on he worked for Domitia Lucilla (1086 a. 154, 1088-9) and M. Aurelius and Faustina (719).

- *333 1268 □ DAMA·MARCI·C·S
(improved)

Dama Marci C. s(ervus).

AC. For the style of this stamp cf. those of M. Fulvius, especially 299, 303, and 306.

- 334 1270/1 ? □ SOC·RATE·MAR
Socrate(s) Mar(ci) (sc. servus) (?).
NS 1892, 115a. This stamp is not well reported.
var. of 1275; cf. above 156-157.

- 335 1275/6 □ STATI·MARCI·HELENI
DEMETRIVS·S·F

Stati Marci Heleni, Demetrius s(ervus) f(ecit).

NS 1922, 412 no. 10. On a sarcophagus. Reported here because it not only adds a new name to the workshop of Statius Marcius Helenus, but contributes also a new link in our knowledge of the development of the Statii Marcii, perhaps the most prominent family of brickmakers during the first century. For we learn from this stamp that Statius Marcius Demetrius (1273, 2460) was a freedman of Statius Marcius Helenus.

- 336 1280 □ ST·MARCI·NEONIS
(completed) ATIMETVS·FEC *palma sinistrorsum*

St(ati) Marci Neonis, Atimetus f(ecit).

NS 1932, 285 (First ship of Nemi). About 40 A. D.

- 337 var. of 1290 □ STATI·MARCI
STATORIS

NS 1895, 395 e (First ship of Nemi); cf. *BL* III 203 (335) n. 285. About 40 A. D.

- *338 1298/9_I ☉ DE PRAEDIS L·MEMMI·RVFI
T·FLAVI·RHODO
signum incertum
AC; BL II 94 (98).
- 339 1298/9_{II} = 1155, to be interpreted now *T. Flavi Rhodonis I. S. L. M(emmi) R(ufi)*, as Marini ingeniously had concluded without any knowledge of 338 (*Iscr. dol.*, p. 284).
- 340 1307/8 □ Q·MODI ^{mo-}_{dus}
SATVRI
NS 1932, 286 n. 11 (First ship of Nemi). About 40 A. D.
- *341 var. of 1314 □ L↓N↓C
Ostia 1938-9.
- 342 var. of 1324 □ C·NÆ·BAL ^{am-}_{phora}
(cf. 1975)
C. Naevi Bal.
Ashby, *PBSR* V (1908), 292, and on the margin of his copy of *CIL* XV 1 ad 1324 (cf. the fragm. 1975):
- 343 1324
(cf. 1973)
He also gives the complete text of 1324 where only the praenomen of the man was lacking (C.) and adds that this stamp (1324) occurs on "several roof tiles in back room of Domus Liviae (Palatine)". 1973 is a fragment of 1324.
- *344 1328 □ C·NÆVI·DEME
(corrected)
C. Naevi Deme(tri).
AC (2 fragm.). Undoubtedly the same stamp is meant NS 1934, 220.
- 345 1328/9 □ L·NAEVI·DPL
NS 1931, 292 n. 232 (Nemi); apparently the same stamp is meant by Thomas Ashby on the margin of his copy of *CIL* XV 1 ad 1329.

- *346 1336/7_I ☉ EX FIG NERATIÆ QVARTILLÆ
PÆTIN ET APRONIA a. 123
SOO
BL III 68, 72 (200, 204) (Ostia).

The following stamp is in mirror writing:

- *347 1336/7_{II} ☐ L·OBIDI·ROMNI
AC.

- *348 1336/7_{III} ☐ P·OCI·CHRES
(with margin)
P. Oci Chres(im?) . AC; cf. above 96.

- *349 1336/7_{IV} ☉ OCTAVENAE PIAE
AC; cf. Vaglieri, NS 1908, 332 (Ostia) where a stamp of the
same form is reported as follows:

350 OCTAVENI PII
L

- *351 var. of ☉ Q·OPPI·VERECVNDI
1348b ramus palmae dextrorsum
NS 1898, 24; now AC.

- 352 1352/3 ☉ EX·PR·S·P·S·G
(1985) C·C·P·S
Although Dressel himself saw that the fragment 1985 probably
depends on 1352, he did not mention it in his comment on
1352. I have given a tentative reconstruction; cf. also the
fragment 1986.

- *353 1353/4 ☉ EX FIGliniS PACCIORVM
PAETINO ET APONI sic a. 123
COS

cf. 2049 : ☉ S PACCIORV . . .
BL II 150 (154) (Villa Adriana and Rome).

- *354 1355/6 APRO ET PAE COS *litt. cavis* a. 123
 □ PAPIRI □

Papiri(ani).

BL III 68, 74-5 (200, 206-7) (Ostia). This stamp comes from the *Praedia Quintanensia* of Annius Verus.

1358; cf. above 307.

- *355 1371/2 ☉ Q Q POMPEIORVM MAMMEI *palma dextrorsum*
 ET MAMMEIANI
 (*Duorum*) *Q(uintorum) Pompeiorum Mammei et Mammeiani*.
 AC. Cf. 356. ..

- *356 1372. Form: ☉. AC. On the basis of 355 this stamp must be read as follows: *Q. Pompei Mammeian(i)*, *Q. P(ompei) M(ammei)*. A similar stamp of two brothers is 1382.

- 357 1375/6 □ T·POMPON·PRIM
 NS 1917, 175.

- *358 1379b. Form: □. Ostia 1938.

- *359a 1381/2_I ☉ C PONTI FELICIS
 ramus palmae dextrorsum
 Ostia 1938; cf. NS 1892, 51 (Rome).

- *359b 1381/2_{II} C PONTI FEL. *litt. cavis*
 Ostia 1938; cf. 359a.

- *359c 1381/2_{III} C PONTI F *litt. cavis*
 Ostia 1938; cf. 359a-b.

- *360 var. of 1383 □ L·PO *signum incertum*
 L. Po(stumi) ?.
 BL II 150 (154) (Villa Adriana).

- *361 1383/4 □ L POSTVMI H
 BL III 87 (219) where NS 1932, 286 is corrected (First ship of Nemi). About 40 A.D.

- 362** 1385/6 □ PRIMIGEN.
DOMIN·N·

Primigen(i) domin(i) n(ostr(i)) (servus).

W. Scheel, *Röm. Mitt.* XLIII (1928), 223 (Rostra Augusti, pavement). Found with 405 (which is wrongly transcribed by Scheel, following Hülsen, *Röm. Mitt.* XVII (1902), 17). On account of form (but cf. 47) and style, Scheel's reading of this stamp seems dubious.

- ***363** 1387. Form like that of 1295. AC. In this example I read PROCILI.

- ***364** 1389/90 ☉ EX·PRAEDIS·M·PVBL
CRISPI
AC.

- ***365** 1390/I_I ☉ EX FIG PVLLAENI POLLIONIS
(cf. 2013) PÆTINO ET APRON a. 123
COS

BL III 69, 72 (201, 204) (Ostia); cf. the fragment 2013. Albius Pullaienus Pollio was cos. suff. in 90. Cf. **366**.

- ***366** 1390/I_{II} ☉ EX·FIGLIN·PVLLAIEN·POLLIONIS
(cf. 1993)
BL III 72 (204) (AC). Cf. **365**.

- 367** var. of 1392 □ T·QVINcTI
PHILEROTIS
NS 1902, 284.

- 368** var. of 1397 ☽ C RABIRI·TIBVRTIN
VICTO
caduceus
NS 1891, 339.

- 369** 1403/4 ☉ C SABIN COM
C. Sabin(i) Com(munis).
BC XXXVII (1909), 302.

- *370** 1404/5 □ SABINVS
NEREI·FEC
AC. Cf. 1404: *Sabinus Nerei C. Caes(aris) (sc. servi) vicarius f(ecit)*. C. Caesar seems to be the emperor Caligula.
- *371** 1408/9 ☉ EX PRAED·L·SAMMI·GALLI
VERO III ET ANBIBVL a. 126
SOO
BL III 122-3, 196 (254-5, 328). (L.) Samnius Gallus previously was known from stamp 1409, dated after the consules suffecti Rufus and Maternus. A newly discovered fragment of the *Fasti Ostienses* shows that they were in office in 128 (cf. *Class. Phil.* XXXIX (1944), 254-5).
- *372** 1411/2 ☽ EX·FIG·C·SATRINI PRISCI
Ex fig(linis) C. *Satrini Prisci(ni)*.
AC. Cf. 1412.
- *373** 1413 □ L·SAVFEIVS·L·F
(corrected) *ramus palmae dextrorsum* *ramus palmae sinistrorsum*
AIM·NIGER
L. *Saufeius* L. f(ilius) *Aim(ilia)* (sc. tribu) *Niger*.
NS 1890, 322 (now AC) and NS 1931, 292, no. 233. A tribus is mentioned also in 1188 and 1474.
- 374** 1416/7 T·SEI LAVT
Form unknown. NS 1935, 153 (Isola di Giannutri).
- 375** 1420/11 ☉ IVVENTI SATVRNINI EX F SEIAES
(cf. 2034) ISAVRIC OPVS DOLIAR
ASIATICO II COS a. 125
in orbiculo: protome Mercuri dextrorsum
Iuventi Saturnini ex f(iglinis) Seiaes Isauric(aes) opus doli-ar(e).
BL II 166, III 82, 194 (170, 214, 326). Cf. the fragment 2034.

- *376 1420/I_{II} ☉ P IVVENTIVS SATVRNINV
(cf. 2250) *caduceus alatus inter duos ramos palmae*
BC XLIII (1915), 58 (Rome); BL II 123, 166 (127, 170)
(Villa Adriana); cf. the fragment 2250 (region of Grottafer-
rata). He is evidently the same person named in 375 as *offi-*
cinator of Seia Isaurica.
- *377 1422/3 ○ EX F SEIÆ ISAV CVRSENI SEDATI
Ex f(iglinis) Seiae Isau(ricae), Curseni Sedati.
BL II 93 (97) (Ostia).
- *378 1425/6 ☉ Ex pRAED SAVRICÆS
TRIVM ICIORV
IVSTIN
[*Ex p*]raed[is Seiaes I]sauricaes, trium[. . . .]icioru(m)
Iustin(i).
Ostia 1938. The fragment, according to its form, belongs to
Seia Isaurica, not to Plotia Isaurica. Iustinus is probably the
name of a workman of the *tres* [*Publ?*]iciu, *offinatores* of
Seia Isaurica.
- *379 1440/I_I ☉ IMP T ANTONINO Aug. Pi O. II. COS a. 139
EX FIG Q. SERV PVD PER
ABAScANT
Ex fig(linis) Q. Se[rv(ili) Pu]d(entis), per Abas[sc]ant(um).
BL III 125, 132 (257, 264) (Villa of Sette Bassi). Q. Servilius
Pudens was the father of the brother-in-law of the emperor
Verus, Q. Servilius Pudens, cos. 166.
- *380 1440/I_{II} ☉ PR ↓ Q ↓ S ↓ P
. COS a. ?
. *pr(aedis) Q. S(ervili) P(udentis).*
BL III 125, 132-3 (257, 264-5) (Villa of Sette Bassi). Frag-
ment of a dated stamp.

- 381 1440/1_{III} ☉ TRA COS a. ?
EX O ↓ S ↓ P ↓

Ashby, *PBSR* IV (1907), 100 (Villa of Sette Bassi). Only seen by Ashby whose restoration of the first line *Tra[iano Aug] cos* is in every respect impossible. Cf. *BL* III 125, 132-3 (257, 264-5). In the second line one can read *ex o[ffici(ina) Q.] S(ervili) P(udentis)*.

- *382 1441/2 ☐ SERVIL·SECVNDILL

Servil(iae) Secundill(ae).

AC. This stamp clarifies also the interpretation of 1127 formerly explained as *Dori Servil(i) Secun(di)* (sc. *servi*); it should be *Dori Servil(iae) Secun(dillae)* (sc. *servi*).

- *383 1459/60 a) SVCCESSI *litt. cavis*
b) SVCCCESS *litt. cavis*

BL II 118-9 (122-3) (Villa Adriana).

The following stamp is in mirror writing:

- *384 var. of 1464 ☐ Γ·TARQ
L. Tarq(uiti). AC.

- *385 1465/6 ☐ L·TARQVIT·MAM
L. Tarquit(i) Mam(mei?). AC.

- 386 1472/3 ☐ T·TETTIVS
BARBARVS·F

NS 1895, 107 (Nemi, sanctuary of Diana). The same stamp has been found on two *pelves*, one of them in Pompei, the other one in Naples (*CIL* X 2, 8048, 44).

- *387 var. of 1475 ☐ M·TITINI
NS 1894, 278, now AC.

- 388 1481/2 ☉ EX·P·L·TVTILI·PONTIANI OF
(cf. 2052) L·MARI·HITPOLITI *sic*

protome galeata cum hasta (Roma?) sinistrorsum inter cornua lunae crescentis

CIL XI 2, 2, 8110 (Lorium) completes the fragment 2052 (Rome). L. Tutilius Lupercus Pontianus was consul in 135.

- 389** 1487/8 □ L·VALERI
ALCIMI
NS 1921, 387 (Ariccia).
- *390** 1491/2 ☉ C VATERNI·CAPITONIS
OF EX OF·PALLAN
C. Vaterni Capitonis of(ficina), ex of(ficina) Pallan(tis).
NS 1911, 205 (where the two lines are published in reversed
order; Rome). AC.
- The following stamp is in mirror writing:*
- *391** var. of 1496 D VETVR . . . *litt. cavis*
D. Vetur[i Cerd. . . .]
SPASR I, 54 no. 225, pl. II 1 (not recognized by the editors),
now AC. Cf. above 114 and 1496.
- 392** 1497 ○ P·VETTI ANTVLLI FLAVIANI
(corrected) *protome Herculis*
NS 1898, 120.
- *393** 1501 read in orbiculo VIOVIV
= (*Vibii*) *Aiaci(ani)*; cf. 1500, 1503-4. Ostia 1938.
- *394** var. I of □ ^{*ramus*} C·VICCI ^{*ramus*}
_{*papaveris*} _{*papaveris*}
1510
AC.
- 395** var. II of □ ^{*cornu*} C·VICCI ^{*cornu*}
_{*copiae*} _{*copiae*}
1510
PBSR III (1906), 73. Cf. 1511.
- 396** 1514 ☉ EX FIG A VICIRI MARTIA
(corrected) FEC PAPIRIV
CAR
Ex fig(linis) A. Viciri Martia(lis), fec(it) Papiriu(s) Ca-
r(icus).
NS 1916, 180 (Ostia); another copy in AC. A. Vicirius Mar-
tialis was *consul suffectus* in 98 (G. Calza, *Epigraphica* I
(1939), 157-159).

- *397 1523/4_I ☉ EX·PR·VISM·SVCCES
MAI
Ex pr(aedis) Vism(ati) Succes(si), Mai(us); cf. 401.
- *398 1523/4_{II} ☉ EX PR VISM·SVCCESSI
PRIMVS
Ex pr(aedis) Vism(ati) Successi, Primus; cf. 401.
- *399 1523/4_{III} ☉ EX PR VISM SVCCESSI
(cf. 1520+1524) TIRIDAS
Ex pr(aedis) Vism(ati) Successi, Tiridas; cf. 401.
- *400 1523/4_{IV} ☉ EX·PR·VISM·SVCCESSI
(cf. 1526) VETVRIVS·SEVE
Ex pr(aedis) Vism(ati) Successi, Veturius Seve(rus); cf. 401.
- *401 1525 ☉ EX·PR·VISM·SVCCESSI
(improved) VISMATIVS FELI
Ex pr(aedis) Vis[m(ati) S]uccessi, Vismatius Feli(x).
Ostia 1939. On the four preceding stamps cf. *BL* II 95-6, 110, III 190 (99-100, 114, 322).
- *402 1526/7 BISM·SVC DO *litt. cavis*
Bism(ati) Suc(cessi) do(liare).
Ostia 1938; cf. the fragment *NS* 1911, 341 (Ostia). This is a stamp of the same Vismatius Successus, brick-yard owner in the last years of Trajan and the early years of Hadrian, who appears in 397-401 and 1518-9, 1521-3. His bricks have been found in Rome, Ostia, Portus, and in the Villa Adriana.
- 403 1532/3 ○ EX·OFIC·L·VITELLI.
ARISTONIS·SV////
Crostarosa, *NBAC* III (1897), 225 no. 48. *Su* . . . may be the name of a workman of Vitellius Aristo. There is a copy of 1532 in AC. Its form is like that of 403 and the F in the center is visible.
- (*)404 1535/6 ○ L·VOLVSI HYMNI
caduceus inter duos ramos palmae
NS 1911, 35; Cozzo, *loc. cit. ad* 53, Tav. LIII, Fig. 177.

- 405 1536/7 ☉ L.FASIDIS ^{palma}_{dextrorsum}
L. (Volusi) Fasidis.
 NS 1911, 35; cf. BC XXXIX (1911), 201. Found together
 with 404 on Piazza Sallustio, Rome. Cf. 1536.

UNIDENTIFIED DATED FRAGMENTS:

- 406 2013/4I ☉ OP D ASBEST. --- a. 123
 PAETI
 Vaglieri, NS 1913, 355 f.(Ostia).
 *407 2013/4II ☉ PAETINO ET APRO a. 123
 MERC ET F
 Ostia 1939.
 *408 2013/4III ☉ IC·PE/
 /PO PAET ET APRONIAN a. 123
 SOO
 BL II 152 (156) (Villa Adriana).

LATERES SUBURBANI

LATERES OSTIENSES (cf. 2156-2223)

Dressel published the stamps from Ostia together with those from southern Etruria (particularly from Lorium, Al-sium and Pyrgi). The stamps from Etruria were re-edited in 1901 by Ihm in *CIL* XI 2, 1, 6689. Vaglieri's excavations at Ostia were covered by Wickert's edition of the stamps of Ostia in *CIL* XIV S 1, 5308, 1-41. These additions to *CIL* XV 1, 2156-2223 and to Dessau's earlier edition in *CIL* XIV 4089 and p. 498 are based almost exclusively on Vaglieri's reports in NS 1906 and 1909-1913. Some of these stamps re-published by Wickert have been treated above, some of them can be identified with stamps already known (see lists at the end of this study). Of Wickert's other stamps only those are

repeated below which add something to those contained in *CIL* XV 1 or to which I wish to add something. There remain about twenty stamps not treated by me in this supplement, which however will be included in the indices.

The majority of the following stamps were found in the excavations at Ostia of 1938 and 1939.

- 409 2156. In two other copies of this stamp the word FIGLINIS is preserved.

NS 1890, 111 and *CIL* XI 2, 2, 8109 (Orvieto).

- 410 2158. The last two words in line 1 should be read TVT·IANVARI.

CIL XIV S 1, 5308, 3 (Villa at Castel Porziano).

- *411 2159 ☉ EX·FIGL·SEM PETRONIORV
(completed) MAMER·ET·SEPTIM

Ex figl(inis) Sem. Petronioru(m) Mamer(tini) et Septim(iani).

CIL XIV S 1, 5308, 4. Wickert's text is based on the faulty reading of one copy by C. L. Visconti (= 2159) and on three fragments published by Vaglieri, *NS* 1909, 129 i, 167 c; 1910, 110. In none of these fragments are preserved the last letters of line 1. Visconti and Vaglieri (fragments 2 and 3) have EX FIG SEM. On a rubbing of this stamp found in Ostia in 1939 I read distinctly EX·FIGL·SEM·PETRON..., the second line as above, FIGL (not FIG), appeared on another fragment discovered in Ostia in 1938.

M. Petronius Sura Mamertinus and M. Petronius Sura Septimianus were the sons (or grandsons?) of M. Petronius Mamertinus, *praefectus praetorio* under Antoninus Pius. Mamertinus became a son-in-law of M. Aurelius and was consul in 182 A.D., Septimianus attained the consulate as Commodus' colleague in 190. Both brothers were killed by Commodus in 190 or 191 (*Hist. Aug., v. Comm.* 7. 5-6). Their father, the *praefectus praetorio*, is presumably mentioned in *CIL* XV 1, 523 as owner of a brick-yard (no reference to this inscription in *RE* XVIII, pp. 1217-9 no. 44). His

offinator is a Gavius Proculus, a name which might be connected with that of Petronius' colleague in his office, Gavius Maximus, whose freedman Proculus may have been.

- *412 2161/2_I □ SEX·ALBAT
MARTIALI

Sex. Albat(i) Martiali(s).

Chigi estate, Castel Fusano, 1938. After a rubbing. The reading *Albat.* is only tentative.

- 413 □ ANNI SABI . . .

Vaglieri, *NS* 1912, 344 = *CIL* XIV S 1, 5308, 7. It seems to me likely that this is a copy of the stamp 809a *Anni Zabdae*, in which the Z has the diagonal stroke in the opposite direction so to render it similar to an S.

- *414 2162/3_I Without frame A · CAEENNI
EVTYCHI

The reading given here is secured by combining *NS* 1910, 65 = *CIL* XIV S 1, 5308, 21 with four fragments found in Ostia in 1938 and 1939. Carefully cut letters distinguish this stamp from the other frameless stamps 418, 432, 434 and 437.

- 415 2162/3_{II} ☉ A. Caes ENNI·EVTYCHI

The fragment published by Vaglieri, *NS* 1906, 447 = *CIL* XIV S 1, 5308, 22 may be supplemented on the basis of 414.

- *416 2163/4 □ CASSI
Ostia 1939.

- *417 2165/6_I ☉ EX·OFICINA CLAVDI
ALEXANDRI

Ostia 1938 and 1939. The same man occurs in 2165.

- *418 2165/6_{II} Without frame COCEI PRO

Ostia 1939. This stamp appears in two forms, from right to left and from left to right. In the latter, PR are upside down, but turned toward the right.

- *419 2165/6_{III} ☉ EX·P·CORNELI·ATICI·OP
M CORNELI THALAM

protome galeata dextrorsum

Ex p(raedis) Corneli At(t)ici, op(us) M. Corneli Thalam(i).

Ostia 1938. Two copies of the same stamp were incorrectly published by Vaglieri, *NS* 1913, 236 (a fragment) and 445. He gave the first line of the latter as follows:

EX P CORNELIAN CLO///.

- *420 var. of ○ EX·OFIC M *Corneli* VALER
2167 *asinus dextrorsum*

Ex ofic(ina) M. [Corneli] Valer(iani).

Ostia 1938. The space between *M* and *Valer* is too large for the supplement *Corn.* only.

- *421 2167/8 ○ EX OFFICINA·CORN VALE·
asinus?

Ostia 1938. Cf. the fragment published by Vaglieri, *NS* 1910, 29 d.

- *422 2168/9 □ PAM PHLI·FAB FIG·TEG
Pamph(i)li Fab(i) fig(uli) (servi?) teg(ula).

Ostia 1939. Found together with other first century roof tiles.

- *423 2169 a □ Q FABI
(completed) FELICIS
Ostia 1938.

- 424 a 2219 □ FaENI·TELESPHORI
(completed)

- 424 b var. of □ FÆNI·TELESPHO
2219

2219 is here completed with the help of 424 b: *NS* 1913, 302 = *CIL* XIV S 1, 5308, 24 (with Dessau's remarks).

- *425 2169/70 □ C·FLAVEI ZOSIM (Z in mirror writing)
ET ÆMEINGENVI

C. Flavei Zosim(i) et Aeme(ilei?) Ingenui.

Ostia 1939. This stamp, which is known to me only from a

rubbing, may belong to a *dolium*. For the archaic spelling cf. 431.

- *426 var. of 2215 ○ FORTIS ↓
(cf. 1945) *corona*

Ostia 1939. Many examples. Fragment 1945 seems to belong to the same stamp.

- *427 2215 FORT *cadu-* *litt. cavis*
cens
(completed)

Ostia 1939. Also CIL VIII S 3, 22632, 60 (Carthage and Utica).

- *428 2170/1 ○ C H N ■
Ostia 1939.

- *429 2171/2 □ C.ERENI....
C. (H)eren(n)i. . . Ostia 1938.

- *430 a 2177/8_I □ eX.F TI IVLI IVLIani

- *430 b 2177/8_{II} □ EX IVLI IVLIANI
BL II 152 (156) n. 115 (Villa Adriana, 1 ex. of a, 2 of b).

- 431 2177/8_{III} □ FIGILINEIS
C IVLI NEICEI

Figilineis C. Iuli Neicei.

Vaglieri, NS 1911, 195.

- *432 2180/1 Without LEONTI
frame
Ostia 1938. Cf. 418 and particularly 434 and 437.

- *433 2183/4 oblong stamp NEC·AV
Ostia 1939. Found together with 1137 and 465 b. Middle of the first century of our era?

- *434 2184/5 Without PHILODA
frame
Philoda(mi).

Ostia 1939. Various examples. Cf. 418 and particularly 432 and 437.

- 435 2188/9 ☉ A·MAXIM OF EX PR·PRA
ST·MESSALINI



A Maxim(o) of(ficinatore), ex pr(aedis) Prast(inae) Messalini o(pus) d(oliare).

Gius. Gatti, *NS* 1898, 24 (Rome, near S. Crisogono), who reads A MAXIMO F EX etc. C. Prastina Pacatus Messalinus was consul in 147 A.D. (Cf. 2189–2190).

- *436 2190/I_I □ PRIMIGENI
SER FECIT

Primigeni(us) ser(vus) fecit. Ostia 1938.

- *437 2190/I_{II} Without frame PROTI
(cf. 2101)

Ostia 1939. Another fragment of the same stamp is 2101 in the AC. The first two letters are turned from right to left. Cf. 418 and particularly 432 and 434.

- *438 2190/I_{III} ☉ L PVPLILI CELSV
ITER COS

L. Puplili(us) Celsu(s) iter(um) co(n)s(ul).

NS 1911, 407 = *CIL* XIV S 1, 5308, 33. 3 copies were found in Ostia in 1938. L. Publius Celsus was consul for the second time in 113; cf. 2157.

- *439 2190/I_{IV} Form: horse-shoe EX·FIGLINIS·M QVIR
(cf. 1995)

Ex figlinis M. Quir(ini) or Quir(inalis).

Ostia 1938. A fragment of the same stamp is 1995 of unknown provenience. Cf. 440.

- 440 2190/I_V ☉ ? VARÆ QVIRIN

Varae Quirin(i) or Quirin(alis) (scil. uxor).

NS 1911, 43 = *CIL* XIV S 1, 5308, 39. Since 439 and 440 both were found in Ostia, *Quirin.* and *Quir.* may be identical.

- *441 2195/6 □ C·SEPTVMI·RVF
C. Septumi Ruf(i) or Ruf(ini) or Ruf(ionis).
 Ostia 1938.
- 442 2207. Three other copies of this stamp found between Luni and Carrara show that the first line reads L·TITINI. Bormann, *CIL* XI 2, 2, p. 1402 ad 6689, 240. L. Titinius L. f(iilius) Gal(eria scil. tribu) Glaucus Lucretianus is known as a dignitary of *Luna* through two inscriptions which he himself set in honor of Nero and Nero's family (*CIL* XI 1331 and 6955 = *ILS* 233 and 8902; cf. also *CIL* XI 1332, 1349 a and p. 1254).
- 443 2207/8 ☉ DOL·DE·FIG . . .
 L · V · N
 ^{gubernaculum}
Dol(iare) de fig[lin(is?)] L. V. N.
 Vaglieri, *NS* 1910, 102 d. L. V. N. is unknown, but he may be identical with V. N. whose *praedia* are mentioned on two stamps of the *figlinae Sext.* (539–540, cf. 153).
- *444 2211/2 □ VRSIORV . . .
Ursioru[m]. Ostia 1938.
- LATERES AGRI TUSCULANI, ALBANI, LANUVINI (cf. 2224–2290)
- 445 2225/6 □ SACRA LANVIO
ILS 9234 (region of Circei and Lanuvio) = *CIL* I 2, 1², 2296 (I 1, 2², p. 737); cf. also Galieti, *NS* 1915, 172 and *NS* 1926, 412 (Lanuvio). *Sacra Lan(u)vio* means "sacred to the Juno of Lanuvium." Cf. Dessau's remarks *loc. cit.*
- *446 2227 □ APOL·ANTONI·M·S
 (completed)
 AC. Cf. 447.
- 447 2228 □ APOLLONI
 (completed) ANTON M S
 Borsari, *NS* 1898, 242 (Via Ostiense). The two stamps 446 and 447 — *Apolloni Antoni M(arci) s(ervi)* — are undoubt-

edly related to 824 *Apol(loni) Ant(oni) L(uci) s(ervi)*. L. and M. Antonius may have been brothers.

- *448 2239/40 □ A·ATTI·CR
AC. Other A. Attii (2240) or A. Atii (2237–2239) occur in the region of the Alban Hills.

- 449 2241 □ BATHYLLI
(completed) SEPTIMIÆ
Borsari, *NS* 1898, 242 (Via Ostiense).

- *450 var. of □ ^{pal-}ma C CLODI·ASCLEPIAD
2243
C. Clodi Asclepiad(is).
Ostia 1939; cf. the fragment Vaglieri, *NS* 1912, 170 (Ostia).
Also 2243 b had been found in Ostia: Vaglieri, *NS* 1912, 438 = *CIL* XIV S 1, 5308, 17 (not identified by either Vaglieri or Wickert).

- 451 2270 □ T·REMMI
(completed) APOLLONI ^{palma}_{dextrorsum}
Crostarosa, *NBAC* III (1897), 234 no. 95 (roof of SS. Silvestro e Martino ai Monti). It is not certain whether the first line is complete on the right side. A fragment of the same stamp found near Grottaferrata is Ashby, *PBSR* V (1910), 257.

LATERES PRAENESTINI (cf. 2291–2376)

- 452 2300/1 □ C·GEM·RVF·Q
C. Gem(ini) Ruf() q(uaestoris).
Ashby, *PBSR* III (1906), 205 ad I (1902), 194 (Gabii). The same stamp together with 2303 (*M. Naut. q(uaestoris)*), also from Gabii, was published by Egbert, *SPASR* II (1908), 275 and fig. 30. For other stamps of *quaestores* of Praeneste cf. — besides 2303 — 2301, 2302, and 453.

453 2302/3 □ C·MINVC·C·F

Q

C. Minuc(i) C. f(ili) q(uaestoris).

Vaglieri, *NS* 1907, 694 (Palestrina). Cf. 452.

454 2347/8 □ PRINCEPS
POMPONI
CORVI ^{coro-}_{na}
SERVOS

Princeps Pomponi Corvi servos.

Gius. Gatti, *BC* XXXVI (1908), 48-52, with fig. on p. 49 (Ponte della Noce, between Anagni and Sgurgola). This is one of the oldest brick-stamps so far discovered in Latium.

455 2350/1 *in tabella* *palma sinistror-*
ansata *sum* C. S....IVS M *palma dextror-*
CASVLI *sum*

[C. S. . . .] *ius M*(), [C] *asuli*.

Ashby, *PBSR* III (1906), 205 (Gabii). The stamp belongs with 2351 by which it is partially completed.

456 2353/4 □ SENTIDI TYRANI

Ed. Gatti, *NS* 1903, 25 g; Vaglieri, *NS* 1907, 694 (both copies from Palestrina). Cf. 2353.

LATERES TIBURTINI (cf. 2377-2395)

*457 2381 a □ C·CAECILI ^{pal-}
(completed) BATHYLLI _{ma}
BL II 121 (125), no. 77 (Villa Adriana).

*458 var. of □ CAECILIA EXOCHE
2383
BL II 152 (156), n. 116 (Villa Adriana).

459 2393. The first line should be read

EX FIG INTELLIANIS DE POR COR =

Ex fig(linis) Intellianis de por(tu) Cor(nelii?) (?) Borsari, *NS* 1892, 347 a (Rome). Cf. *tegulae portus Licini* and *portus Parrae* (139, 226, 408-411).

LATERES EXTERNAE ORIGINIS (cf. 2396-2415)

- *460 2397 ☉ EX·FIGLINIS
(improved) AVIDI QVIET

Ostia 1939. This corrects C. L. Visconti's reading of another example from Ostia published as 2397. The stamp is known also from Sardinia where two copies have been found. Hence Dressel concluded that it probably was of Sardinian origin. The discovery of one more example in Ostia has now upset these numerical relations. The stamp 42 of Domitia Lucilla reported above has been discovered in numerous examples in Carthage, while not one fragment from Rome or Central Italy is known to us, and yet no one would question the Roman origin of this stamp. Furthermore, to import bricks from Sardinia to Rome would have been carrying coals to Newcastle. Rome and the whole environment of Rome exported bricks, and unless definite reasons recommend the assumption of import to Rome, it is safe *a priori* to take the opposite view.

Avidius Quietus has so far been identified with T. Avidius Quietus, proconsul of Achaia under Domitian and *leg. Aug. pro praetore Britanniae* in 98 or 99 A.D., who died before 107 (Pliny, *ep.* VI 29); cf. Groag, *PIR* I², 288 f., no. 1410. But on account of the form of the stamp, it seems to me more likely that the brick-yard owner is rather Quietus' son, T. Avidius Quietus, *consul suffectus* 111 A.D. (*NS* 1932, 191) who was proconsul of Asia about 125/6 A.D. (Groag, *op. cit.*, 287, no. 1409).

- *461 2400/1 ○ TI·CLA·POTISCI.
Ti. Cla(udi) Potisci.

Ostia 1938 and 1939, 2 ex. The stamp had been known before, Vaglieri, *NS* 1912, 345 = *CIL* XIV S 1, 5308, 16 (Ostia) and F. Icard, *Bull. arch.* 1923, 34 no. 17 (Carthage), but the connection with the imperial freedman 2399 and 2400 had not been recognized. Vaglieri's reading PODISCI (adopted by Wickert in *CIL* XIV S 1) must be due to an error.

*462 2408/9 ○ PHILETVS F
C.

Philetus f(ecit). C. AC. Cf. 463–465.

*463 2409/10 ○ THALLI
M

AC. Cf. 462, 464–465.

464 2403–10 a) ○ /RSTI b) ○ PICI// c) ○ AS/I
M M M

Vaglieri, *NS* 1909, 53e *NS* 1909, 53f *NS* 1913, 218e

*465 a) ○ ...EPRONIS b) P...LI
M C

Ostia 1937.

Ostia 1939.

462–465 belong to a group of stamps characterized by a smaller diameter (5.2 cm) and by the fact that they contain only the name of a slave and in the center a hitherto unexplained letter (C eight times, M seven times, and S four times). Various examples have been found in Campania (*Acti*. *S. CIL* X 2, 8042, 5 in Pompei; *Pyladis*. *C. Ibid.* 8042, 87 in Puteoli; *Urbani*. *S* together with 2411. *Ibid.* 8042, 111 in Pompei), but many more in Rome and especially in Ostia. Of Roman origin are: 2403, 2408, 2410, 462 and 463. In Ostia were found: 2404, 2406, 2409, 2411 and the five fragments 464–465. 465 b was found together with 1137, a stamp of Faenius Rufus, Nero's *praefectus annonae* from 55 to 62, and his *praefectus praetorio* from 62 up to his execution in 65. There is certainly no objection against placing the whole group of stamps in the period of Nero and considering as its origin Ostia or the region of Rome. It is under Nero that the export of Roman *pelves* to Pompei and in general to Campania is particularly great; cf., e. g., 268 = 489.

*466 2415. Many copies of this stamp were found on the roof of S. Maria Maggiore, cf. Crostarosa, *NBAC* II (1896), 55–56, 79–87. Pietrogrande, *NS* 1934, 158 and fig. 4. Also in this

case the theory of a foreign origin of a stamp had to be given up.

DOLIA, PELVES, ARCAE, LATERCULI ANAGLYPTI (cf. 2416-2557).

In a chapter which formed an appendix to the first part of *CIL* XV, Dressel assembled the stamps of the clay vessels, usually large, produced by the manufacturers of bricks, who did not engage in the production of smaller utensils, amphorae and lamps, etc., edited by him in *CIL* XV 2. Therefore the interrelation between stamps on bricks and *dolia* is very close. Often exactly the same stamps were used for both kinds of products, e.g., 2417 = 1106 b, 2433 = 1097 f, 2434 = 1105, 2443 = 1161, 2446 = 1358, 2456 = 1242 a, 2471 = 1305, 2496 = 1017.

Even as Roman bricks were exported to other parts of Italy and to the provinces, so Roman *dolia* and *pelves* are found outside of Rome. Naturally the vessels which have come down to us are a small number compared with the millions of Roman bricks which still exist. As a consequence, the discovery of a stamped *dolium* or *pelvis* usually means the discovery of a new stamp, while even a large group of stamped bricks in Rome or Ostia nowadays rarely yields more than 10% unpublished stamps, often much less.

The suddenness of the destruction of Pompeii has preserved there an appreciable number of *pelves*, by now between fifty and one hundred, which are exclusively of Roman make. In view of the fact that they all are dated anterior to 79 A.D., this group of *pelves* from Pompeii has had great importance for the chronology of Roman brick-stamps of the first century, especially of the stamps of the *Domitii*. They were edited by Dressel in 1883 in *CIL* X, 2, 8048. Although Dressel made full use of this material from Pompeii in his discussion of the *Domitii* and elsewhere throughout *CIL* XV 1, he unfortunately did not incorporate it into the volume, referring

simply to the edition in *CIL* X 2, which typographically and otherwise is below the standards of *CIL* XV. While the publication of these stamps within the *Instrumentum domesticum* of Campania and especially of Pompeii is fully justified, in this case a second edition in *CIL* XV 1, which would have been an improved edition, would have been warranted. In other instances the editors of the *CIL* were more generous. In order to remedy in part this situation I shall give below at least simplified transcriptions (disregarding obvious restorations) of the Roman stamps published in *CIL* X 2, 8048, so that they can be coordinated with the other stamps of Roman origin. This will be in addition to the material which follows; material that has become known from Rome and Central Italy since 1890 and from Pompeii since 1883. Stamps from Etruria and Africa which are manifestly of Roman origin or related to Roman stamps have been included as far as they are known to me.

The organization of the stamps will be on the same principle as throughout the rest of this supplement. Dressel altogether abandoned this arrangement for the *dolia* in favor of an alphabetical order according to the first person mentioned.

In the transcription of stamps from Pompeii / indicates the beginning of a new line, // means that the ornament that follows or precedes is a separate stamp. They all are of rectangular form.

- 467 (From right to left) [M.] Alf(ius) / (ramus palmae) / Crescen[s].
CIL X 2, 8048, 1 (*pelvis Pompeiana*). The same man occurs on the Roman brick-stamp 788.

- 468 □ M ANT FELICIS

M. Ant(oni) Felicis.

NS 1910, 166 c (*pelvis*, Rome, Via Portuense).

The same man appears in 225 and 2543.

469

□ SEX·ATILIVS
FORTVNATVS

NS 1910, p. 166 b (*pelvis*, Rome, Via Portuense).

As producer of bricks under Trajan Sex. Atilius Fortunatus occurs in 868 and 869.

*470

□ ^{cornu}_{copiae} L·AVTRONI ^{bi-}_{pennis}
XANTHI

Ostia 1939. *Dolium* in a deposit of *dolia* in which were also discovered 471, 509, 537, 539, 564, and 565.

*471

□ ^{bucra-}_{nium} L·CaECILIVS ^{signum}_{detritum}
PROCLVS

The ornaments are separate stamps. Ostia 1939.
Dolium in the same deposit as 470.

Calpetani (471 A–476)

The Calpetani were one of the families of brick-makers who worked in the *Figlinae Marcianae* beginning in the time of Tiberius and Gaius. We find them there still under Septimius Severus, 160 or 170 years later (cf. *BL* III 203 (335)).

471 A The stamps of C. Calpetanus Auctus, the earliest of the Calpetani, found on three sarcophagi have been reported above, 73, 74, and 76.

472

□ EVSEBETI
C·CALPETAN

[*E*]usebeti(s) [*C.*] Calpetan(i) (scil. *servi*).

Pasqui, NS 1910, 166 a (*pelvis*, Rome, Via Portuense). According to its style, this stamp seems to be related to 76 (i. e. to the stamps of C. Calpetanus Auctus) rather than to those of any later Calpetanus.

473

= 243. C. Calpetanus Crescens is undoubtedly a freedman of C. Calpetanus Favor as whose slave he appears on the *pelvis* 2422 a.

- 474 □ ^{nux}
^{pinæ} VENVSTVS ^{nux}
^{pinæ}
C·CAL·FAORIS
Venustus C. Cal(petani) Faoris (scil. *servus*).
NS 1896, 327 (*dolium*, Rome, Via Portuense).
Cf. BL III 203 (335).
- 475 *Crescen[s] / C. Calpeta[ni] / Liviani.*
CIL X 2, 8048, 3 (pelvis Pompeiana). Cf. 476.
- 476 *Viator / [C.] Calpet[ani] / Liviani.*
CIL X 2, 8048, 4 (pelvis Pompeiana). No stamp of C. Calpetanus Livianus has been found in Rome so far.
- 477 a □ SEX·CASTRICI
SALVI ^{ramus palmarum}
^{dextrorsum}
Fornari, NS 1917, 175, cf. Colini, I sepolcri repubblicani di Via Statilia, *Monumenti di Roma*, ser. B., II, 1943, 15 n. 8.
- 477 b □ SEX·CASTRICI SAL
Sex. Castr(i)ci Sal(vi).
"Toscanellae apud Ruggerium Kellermann descripsit sigillum nescio cui rei impressum (non videtur fuisse in tegula) hoc." Dressel *ad* 918. Between R and C an I is omitted, presumably in ligature with R. A stamp of a Sex. Castricius Hebenus also appears on a sarcophagus (2425 and another copy, again on a sarcophagus, NS 1922, 411). Cf. the name *Figlinae Castricianae*, 141. 477 b is edited also in CIL XI 2, 1, 6705, 5.
- 477 A = 1355 = CIL I 2, 1², 2303. *Pamphil(us) Ceion(i) (Gai)s(ervus).*
NS 1922, 411 (sarcophagus, Rome).
- 478 □ Ti. CLAVDI SABINI
CreSCES Fecit
Della Corte, NS 1921, 417 (*pelvis Pompeiana*).
The identity with Ti. Claudius Sabinus, whose name is very frequent on the Roman brick-stamps 933 a-e, cannot be questioned.

479

2431 and in addition

□ CALAIS FECIT

CIL XI 2, 1, 6691, 9 (Rignano Flaminio); cf. 480.

480

□ C.CORNELI·FELI

CIMBER·FEC

[C.] *Corneli Feli(cis)*; *Cimber fec(it)*.CIL XI 2, 2, 8114, 2 (*dolium*, Viterbo). Calais (479) and Cimber are slaves of C. Cornelius Felix who appears alone on *dolia* in 2430, 2431 (Rome).

Domitii (481–503).

481 *Cn. Domit* . . . (scil. *Afri*).CIL X 2, 8048, 5 (*pelvis Pompeiana*). Either identical with or very similar to 979.482 *Favor* / *Cn. Domit[i]* (scil. *Afri*).CIL X 2, 8048, 10 (*pelvis Pompeiana*). Cf. 981.483 *Ismari* / *Domit[i]* (scil. *Afri*). // (*ramus palmae*).CIL X 2, 8048, 12 (*pelvis Pompeiana*). Cf. 983.484 = 984. CIL X 2, 8048, 13 (*pelvis Pompeiana*). Two other *pelves* with the same stamp of Ismarus have since been found in Pompeii (NS 1902, 275; 1933, 278 no. 15).485 *Liberal[is]* / [*Cn.*] *Dom(iti* scil. *Afri*) *f[ec]*.CIL X 2, 8048, 14 (*pelvis Pompeiana*).486 a *Prisci Afri* / *Domiti*.CIL X 2, 8048, 16 (*pelvis Pompeiana*).

486 b var. of the □ PRISCI·AF

same stamp DOMITI

Prisci Af(ri) / *Domiti*.NS 1887, 563 (*pelvis Pompeiana*).487 *L. R(u.) Sos(iae)*.CIL X 2, 8048, 26 (*pelvis Pompeiana*). Var. of 986. "

- 488 *Cn. Cn. Dom(itiorum) / Luc(ani) et Tul(li).*
CIL X 2, 8048, 6 (pelvis Pompeiana). Cf. 989.
- 489 = 268. Stamp of Apollonius and Ismarus.
CIL X 2, 8048, 7 (pelvis Pompeiana).
- 490 *Daphni / Domitiorum / Tulli et Lucani.*
CIL X 2, 8048, 9 (pelvis Pompeiana). Cf. 995.
- 491 *Cn. Domitius / Secundus fec(it).*
CIL X 2, 8048, 18 (pelvis Pompeiana); 8056, 127 ("arca cretacea," Puteoli). Cf. 996.
- 492 *Lygdi duo[r(um)] / Domitior(um).*
CIL X 2, 8048, 15 (pelvis Pompeiana).
- 493 = 2485 (*Priscus duor(um) / Domitiorum*).
NS 1902, 381 (pelvis Pompeiana). 2485 is impressed on two dolia apparently found in Rome. Priscus had been formerly in the service of Cn. Domitius Afer (486).
- 494 *///FRACVI///*
DOMITIORM
 Della Corte, *NS 1921, 439 (pelvis Pompeiana).*
 I am unable to restore the name of the slave.
- 495 *////////DVORVM*
Domi TIORVM SE
 Della Corte, *NS 1933, 304 no. 238 = Maiuri, Casa del Menandro I, 469 (pelvis Pompeiana, twice impressed).* Lacking is the left and more important half of the stamp which contained the name of the workman . . . *duorum [Domi]tiorum se(rvus)*; for the style of the stamp cf. 994, 997, 1000 c, e-i, 1001.
- 496 *PrIMIGEN*
CN DOM TVLL
[Pr]imigen(i) [C]n. Dom(iti) Tull(i) (scil. servi).
Gabrics, NS 1906, 91 = CIL XI 2, 2, 8115 (dolum, Volsinii, now Florence). Cf. 2482.

497

□ EARINI
DOM LVC*Earini Dom(itiae) Luc(illae)* (scil. *servi*).Vaglieri, *NS* 1908, 332 (*pelvis*, Ostia). Cf. 1922, 1047-1050.

The form of the stamp is very similar to that of 1017 = 2496.

498

[C]n. Domit[i] / [Fa]voris.

CIL X 2, 8048, 11 (*pelvis Pompeiana*). Favor had been formerly in the service of Cn. Domitius Afer. (482).

499

= 1093. Cn. Domiti / Salutaris.

CIL X 2, 8048, 17 (*pelvis Pompeiana*); *CIL* VIII S 3, 22636, 2 (fragment, Carthage).

*500

= 1094g. Cn. Domitius / Arignotus fec(it).

AC. *Dolium*.

501

= 1094h. *CIL* X 2, 8048, 8 (*pelvis Pompeiana*).

502

□ CN·DOMITI
CLEMENTISTh. Ashby in his copy of *CIL* XV 1 ad 1102:

"La Vetrice 9. 3. 21 on a dolium."

503

= 1117a. Decembri Cn. Domiti Trophimi.

Gius. Gatti, *NS* 1893, 71 (*dolium*, Rome).

504

L·FABIUS·L·APOL *stella circulo*
SEX·TOSSIVS·L·F *inscripta**L. Fabius L. {f(ilius)?} Apol()*; *Sex. Tossius L. f(ilius)*.Ghislanzoni, *NS* 1912, 378 (*dolium*, Rome).

The "f." in line 1 is perhaps omitted through a mistake of the editor.

505

□ *pal-* L·FABIUS·L·F *pal-*
ma *ma**CIL* XI 2, 1, 6691, 10 (*dolium*, Viterbo).

Probably the same person as 504, line 1.

On the Tossii cf. below 553, 556-558.

506

□ T·FLAVI·PYRAMI
ADIVTOR·SER·FEC

T. Flavi Pyrami; Adiutor ser(vus) fec(it).

Gius. Gatti, *NS* 1893, 332 (*dolium*, Rome).

This T. Flavius Pyramus may be the imperial slave Pyramus in 537 after his manumission. Cf. the commentary there.

506 A On the stamps of the Fulvii falling in this category cf. 300 (2443), 301 (2444), 302 (2445), 307 (*CIL* X 2, 8047, 15, *dolium*, Pompeii), and 308.

507 *Ti. Iulius / Iucundus f(ecit).*

CIL X 2, 8048, 19 (*pelvis Pompeiana*). Cf. 2450 (Rome).

508 = 2451. Stamp of Ti. Iulius Periander.

CIL X 2, 8048, 20 (*pelvis Pompeiana*). Another *pelvis* with the same stamp was published by Della Corte, *NS* 1913, 414 no. 13 (Pompeii).

*509

□ C IVLI RVFI
□ L·ARISTÆVS
bucrania RESTITVTVS FF bucrania
caput caput caput caput
bovis bovis bovis bovis

C. Iuli Rufi; L. Aristaeus Restitutus fe(cit).

The ornaments are separate stamps.

Ostia 1939. *Dolium* found together with 470, 471, 537, 539, 564, and 565.

510

□ DE FIGLINIS
D·LABER/·APH

De figlinis D. Laber[i] Aph(rodisei?).

Giglioli, *NS* 1914, 221 = *CIL* XI 2, 2, 8114, 3 (*dolium*, Nera-Montoro, near Narni). A D. Laberius Saturninus occurs in 2453.

511 *Luri (palma) / Blandi.*

CIL X 2, 8048, 21 (*pelvis Pompeiana*). Cf. 1248.

512

□ L. LVRIVS
ramus palmae
 PRIMIT..

[L.] *Lurius* [P]rimit[iv(us)].

AC. *Dolium*. The same man appears in 208 (cf. 50) as *offinator* of Seia Isaurica.

(*)513

□ C·MARCI·L·F

Stefani, NS 1924, 64 and fig. 1 (*dolium*, Rome, via Nomentana).

Statii Marcii (514–520, 522–527, 529).

On the importance of the Statii Marcii cf. above 335 and BL III 88 (220).

514 S. M. A. = S(tati) M(arci) A()?

CIL X 2, 8048, 33 (*pelvis Pompeiana*). This stamp was found on the same *pelvis* as 498.

515 St(ati) M(arci) Cel(eris) // (*ramus palmae*).

CIL X 2, 8048, 34 (*pelvis Pompeiana*).

516 St(ati) M(arci) Celer(is) // Quieti.

CIL X 2, 8048, 35 (*pelvis Pompeiana*). The name of the workman Quietus is added to that of his master Celer.

517 M(arci) Stati / (*ramus palmae*) / Florenti // (*apri duo*)

CIL X 2, 8048, 36; cf. Sogliano, NS 1892, 204 = RM VIII (1893), 56 (*pelvis Pompeianae*).

518 St(atius) Marci[us] / Fuscus fec[it].

CIL X 2, 8048, 37 (*pelvis Pompeiana*). Cf. the similar stamp of the same man: 2461 (Rome).

518 A = 335.

519 Statius / Marcius / Lucifer fec[it].

CIL X 2, 8048, 38 (*pelvis Pompeiana*); cf. 520.

520 a *M(arci) Stati / (ramus palmae) / Luciferi.*
CIL X 2, 8048, 39 (*pelvis Pompeiana*).

520 b □ M·STAT
LVCIFER

Bull. arch. 1917, CLXXXVII (*pelvis*, Carthage).

This stamp is closely related to, if not identical with 2462.
Cf. 519 and 525.

521 a = 1283. CIL X 2, 8048, 22 (*pelvis Pompeiana*).

521 b Identical with a, except that it has MARC in the first line.
Della Corte, NS 1913, 416 no. 18 (*pelvis Pompeiana*).

522 a *Status Marcius / (ornamenta) / Primigenius fec(it).*
CIL X 2, 8048, 40 (*pelvis Pompeiana*).

522 b □ STATIVS MARCius
PRİMIGENIVS
Borsari, NS 1892, 347 b (Rome).

523 □ ST·MARCI ^{capitellum}
RETITVTI ^{ionicum} sic

[S]*t(ati) Marci Re(s)tituti*. The ornament is a separate stamp. Della Corte, NS 1927, 110 no. 114 (*pelvis Pompeiana*). A brick (?) with a stamp of the same man was found in Rome (1285).

524 □ ^{ramus} ^{palmae} St. MAR·REStituti
ALBANVS·Fecit

[*St(ati)*] *Mar(ci) Res[tituti]*; [*A*]lbanus f[ecit].

The ornament is a separate stamp. Della Corte, NS 1933, 305 no. 247 (*pelvis Pompeiana*). Cf. 525.

525 □ ^{corona} ST. MARC
RESTITVT

□ LVCIFER
FEC ^{palma}
^{dextrorsum}

St(ati) Marc(i) Restitut(i); [*L*]ucifer fec(it).

531 *M. Marius / Priscus f(ecit).*

CIL X 2, 8048, 24 (*pelvis Pompeiana*). A variety of this stamp is 2468 on a Roman sarcophagus.

532 a *M. Marius / Secundinus. CIX X 2, 8048, 25 a-c.*

532 b *M. Marius / Secundin(us) fec(it). CIL X 2, 8048, 25 d (pelves Pompeianae).*

*533 2474 □ L·NVMER///// (completed) MODERAT·FE//

2474. Another fragment of the same stamp, preserved in the AC, completes the left side.

534 □ *M. PetRONI LEONIS*
APOLLONIVS SER Fec

[*M. Pet*]roni Leonis; *Apollonius ser(vus) f[ec(it)]*.

CIL VIII S 3, 22636, 6 (*pelvis*, Philippeville).

[*M. Pet*]ronius Leo is undoubtedly the same man who before his manumission had been in the service of *M. Petronius Veteranus* as *ser(vus) Leo* (2480; cf. also 535).

535 □ *caduceus alatus*
M·L·PETRONIORVM
VETERANI·ET TIRONIS
□ P·GAVI
SECVNDI

ramus

The ornaments are separate stamps.

CIL XI 2, 1, 6691, 17 (*dolium*, Bolsena). *M. Petronius Veteranus* occurs also on another *dolium* found in the Pontine Marshes (2480; cf. also 534).

*536 □ FECIT·PRISC....
FIGLINIS OCE...

AC. *Priscus* cannot be identified. For another stamp from the *Figlinae Oceanae* cf. 526.

*537

□ *cadu-
ceus
ala-
tus*PYRAMI ENCOLPI
AVG DISP·ARCARI*cadu-
ceus
ala-
tus*

□ AMPLIATVS·VIC·F

*cadu-
ceus
ala-
tus*

Pyrami, Encolpi Aug(usti) disp(ensatoris) arcari; Ampliatus vic(arius) f(ecit).

The ornaments are separate stamps.

Ostia 1939. Both stamps are found on two *dolia* from the deposit of *dolia* where also were 470, 471, 509, 539, 564, and 565. Pyramus was the *arcarius* of the imperial *dispensator* Encolpus, Ampliatus his *vicarius*. An *Aug(usti) disp(ensator) arcar(ius) regn(i) Noric(i)* occurs in ILS 1506 (Virunum = Klagenfurt); an *Aug(ustorum) n(ostrorum) dispensatoris arkarius* in ILS 1661 (Caesarea, Cappadocia); a *dispensatoris fisci castrensis arcarius* in ILS 1660 from Rome (cf. O. Hirschfeld, *Kaiserl. Verwaltungsbeamte*², 401 n. 3 and 461 n. 3). Encolpus may have been connected with the *annona*. It has been suggested above that T. Flavius Pyramus (506) and the Pyramus of the present inscription might be the same person.

538

□ RHODINVS
SER·FEC

Gius. Gatti, *NS* 1903, 202 (Ostia). Found together with 2449, where line 1 ends in RASINI, line 2 in *fe(cit)*.

*539

□ II·RVFENORVM
CELERIS ET POLLIO

(*Duorum*) *Rufenorum Celeris et Pollio(nis)*.

The ornaments are separate stamps.

Ostia 1939. *Dolium* from deposit of *dolia* where also were 470, 471, 509, 537, 564, and 565.

*540 2487

□ L·RVFENI·PROCVLI
COGITaTVS·SER·F

(improved)

AC. Same copy as 2487.

(*)541

		L RVSTI	
□	ramus palmae	LYGDAM	ramus palmae
		clava	
	caput bovis	caput bovis	caput bovis

The ornaments are separate stamps.

Stefani, NS 1924, 65 and fig. 3 on p. 64 (Rome, via Nomentana). L. Rustius Lygdamus occurs in the service of Seia Isaurica in 1418-1419.

542 *Com / Rutili.*

CIL X 2, 8048, 27 (*pelvis Pompeiana*). The stamp is hardly complete, as Dressel has already remarked. Perhaps *Com[mu- (nis)] Rutili[ae (scil. servi)]?* Cf. 2456 = 1242 a *Liberalis / Rutiliae*.

Satrinii (543-550).

The Satrinii are, besides the Calpetani and Marcii, the third large *familia* of makers of bricks and *dolia* in the first century; cf. BL III 88 (220).

A number of stamps clearly form a group; they are characterized by giving first the name of the owner in the genitive and in the second line that of a workman in the nominative followed by *f(ecit)*. The following stamps belong to this group.

543 *C. Sat[rini] / Adšeş. . . //* (*pampinus*)

CIL X 2, 8048, 28 (*pelvis Pompeiana*). The name of the slave is hardly correctly read.

544 [C.] *Satrini / [A]timetus fe(cit)*.

Della Corte, NS 1923, 274 (*pelvis Pompeiana*).

This stamp is a variety of the brick-stamp 1411 (Rome).

545 *C. Satrini Celeri[s] / Callistus fe(cit)*.

CIL X 2, 8048, 29 (*pelvis Pompeiana*).

546 [C.] *Satrini Cel[eris] / Celer of. .*

CIL X 2, 8048, 30 (*pelvis Pompeiana*). The reading of the second line seems doubtful.

547 [C.] *Satrini Cel(eris) / Clemens f(ecit)*.
CIL X 2, 8048, 31 (*pelvis Pompeiana*).

548 a *C. Satrin.* . . . / *Phoebus f[ec(it)]*.

548 b [C.] *Satrini C.* . / [P]*hoebu[s fec(it)]*.
CIL X 2, 8048, 32 (*pelves Pompeianae*).

The cases **545**, **546**, and **547** are of course beyond any doubt. But as to **543** and **544**, one might suggest, as Dressel actually did (*ad* 1411), the reading *C. Satrini(us) Atimetus fe(cit)*. In view of the analogies offered by **545–547**, **79**, **80**, **559**, 1491 (cf. **560**!), this is highly unlikely if not impossible. On the other hand, it cannot be denied that the name to be supplemented in **548** and to be understood in **543** and **544** is not necessarily that of C. Satrinus Celer; it might be that of C. Satrinus Communis (cf. **79**, **80**), whose stamps also have been found in Pompeii (**549** and **550**). But Celer's stamps are more frequent in Pompeii, since he worked during the last ten or twenty years of the city, whereas Communis' activity was about 40 A.D. (cf. **80**).

C. Satrinus Celer is known from bricks of the *Figlinae Castricianae* (141), *Ociana* (388), and *Marciana* (303–305). But names of his workmen appear only on the *pelves*. Of them, Callistus, Celer and Phoebus (?) are otherwise unknown, Clemens (**547**) however was freed and worked with his former master in the *Figlinae Oceanae* as C. Satrinus Clemens (384, cf. **96**).

549 = 308. Stamp of C. Satrinus Communis.
CIL X 2, 8047, 17 (*dolium*, Pompeii).

550 □ C SATRINI
 COMMVNIS

Sogliano, *NS* 1901, 261 (*pelvis Pompeiana*).

In this stamp the name of the *Figlinae Marciana* was not mentioned.

550 A The two stamps of Auctus, workman of C. Satrinus Communis, are edited above **79, 80**; cf. *ad* **543–548**. As in the case of C. Satrinus Celer, the workman Auctus appears only on *dolia*, etc. For the bricks of Communis cf. 306–309, **77–78**, and **573–574**.

551 □ SER SVLP
 ATTICI

Ser. Sulp(ici) Attici.

Vaglieri, NS 1911, 408 (*pelvis*, Ostia).

552 □ L·TETIVS

CIL XI 2, 1, 6691, 21 (Savignano); cf. **553**.

553 □ FIGL·L·TETTI BALBI
 ANTIOC·TOS·SEX

Figl(ina) L. Tetti Balbi; Antioc(hus) Tos(si) Sex(ti) (scil. *servus fecit*).

CIL XI 2, 1, 6691, 22 (*dolium*, Orvieto); cf. Gamurrini, NS 1884, 188. Sex. Tossius occurs in a similar capacity in the stamp of L. Fabius Apol(), **504**.

554 = **386**. Stamp of T. Tettius Barbarus.

CIL X 2, 8048, 44 (*pelvis Pompeiana*).

555 [T.] *Tetti / Restituti*.

CIL X 2, 8048, 45 (*pelvis Pompeiana*).

Obviously related to T. Tettius Barbarus (**554**).

556 2503 □ Q * TOSSI
(completed) CLARI ^{pal-}_{ma}

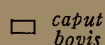
CIL XI 2, 1, 6691, 23 (*dolium*, Viterbo).

The stamp from Viterbo completes the Roman stamp 2503. In form it is almost identical with 2502 (*Q. Tossi Cimbri*). Since Cimber was a freedman of Q. Tossius Ingenus (2504 and **557**), it is likely that Clarus also served first under Ingenus.

CIL XI 2, 1, 6691, 26 (*dolium*, Rignano Flaminio).

Priscus is the fourth slave known to have worked for C. Vibius Donatus, manufacturer of bricks and *dolia*: Felix (1505-1506), Florus (2511), and Fortunatus (2512) are the other three. In form 563 is closely related to 2511 and 2512. Cf. also 565 and 2439.

*564



C·VIBIVS

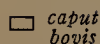


FORTVNAT FEC

The ornaments are separate stamps.

Ostia 1939. *Dolium* from deposit of *dolia* where also were 470, 471, 509, 537, 539, and 565. C. Vibius Fortunatus is the *Fortunatus ser(vus)* of 2512 after his manumission by C. Vibius Donatus. Cf. 563.

*565



C VIBI FORTVNATI



C VIBI CRESCENTIS

Ostia 1939. *Dolium* from the same deposit of *dolia* as 564. On C. Vibius Fortunatus see 564. C. Vibius Crescens was undoubtedly a slave of Vibius Donatus before his manumission.

566 *Utilis fe(cit)*.

Bendinelli, NS 1922, 412 no. 12 (sarcophagus, Rome).

567 2556 in tabella C·CVLCHIVS

(completed) *ansata* NYCHIVS FEC

H. v. Rohden and H. Winnefeld, "Architektonische römische Tonreliefs der Kaiserzeit," in *Die antiken Terrakotten*, vol. IV 1, 1911, p. 20*, and vol. IV 2, pl. II 2. In this work a survey of the stamps on these reliefs is given on pp. 19*-20*, according to which 2546 and 2554 should be eliminated as not belonging to the original reliefs. For 2543 cf. pl. LXXIII; for 2545 the new example in NS 1908, 133, for 2548 the complete copy mentioned p. 20.*

MANTISSA

In the course of preparing the indices and repeatedly going over my material, I discovered a number of other improvements and additions which could not be inserted in the foregoing supplement. They are appended here in the same order which has been observed above.

Furthermore, in order to make this supplement more complete, it has been decided to publish here also the fourth and fifth-century stamps that have become known to me (cf. above p. 5).

- 568** ☉ ? *Ex praedis Coeli Fortunati, figlinis Antull(ianis), facit Caet() Mag(nio).*

Dressel in his comment to 943 (cf. also 1203), referring to the addenda which have never been published. Coelius Fortunatus is related to M. Coelius Philetus for whom the same Caet() Magnio worked in the period of Hadrian (942-944). Magnio was also the *officinator* of C. Iulius Apollinaris (1203). The *Figlinae Antullianae* are not known otherwise, but the name is perhaps derived from that of P. Vettius Antullus Flavianus (392, cf. 1497).

- *569** 92 b. In the second line SERVIAN must be read. Cf. *SPASR* I, 14 no. 10. This copy is now in the AC. It agrees with two other unquestionable examples of 92 b seen by me. Dressel's reading was solely based on a text of Marini which admittedly is confused.

- 570** 189. The second line ends in VETER. Crostarosa, *NBAC* III (1897), 229 no. 70.

- 571** 241. Dressel's restoration is confirmed by Crostarosa, *NBAC* III (1897), 238 no. 125.

- 572** 294 ☉ EX FIGL MACEDO HADRIANI SEVERI
(completed) EX OFIC SYNTRO
Gu. Gatti, *BC* LXIV (1936), 79 n. 64 (Rome). J. B. Frey,

Corpus Inscriptionum Iudaicarum I, 1936, 216, no. 53 (fragment). Gu. Gatti confirms by letter the reading given here.

- 573 305/6. Form: lower half-circle, probably like 302.

MARCIANA

v. 1 *linea recta*

C SATRINI COMMVNIS

Ligatures for this stamp are not indicated.

J. B. Frey, *op. cit.* (572), p. 213, no. 17 (Rome).

The stamp is in form and style analogous to 302 of C. Calpetanus Auctus. Both belong to the middle of the first century, when stamps of this shape were particularly frequent (cf., e. g., 631, 656–662 of the *Figlinae Tonneianae* and *Viccianae*). Frey's stamp further emphasizes the early date of C. Satrinus Communis pointed out above, 548.

- 574 309/10 ○ ///SATRINI·COMMVNIS

//OFFICINIS·MARCI///

[C.] *Satrini Communis*, [*de?*] *officinis Marci*[*anis*].

Crostarosa, *NBAC* II (1896), 57 no. 7 (Roof of S. Maria Maggiore). The plural of *officina* for *figlinae* seems unique.

573 and 574 are the only non-rectangular stamps of Communis (listed above 550 A).

- *575 326. Form: ☉. AC. Two other examples in Ostia 1938.

- *576 457. Form: ☉. The first line starts:

EX PRÆD RVPILLIÆ

Pietrogrande, *NS* 1938, 403 (Rome, via S. Basilio).

- *577 465 b. The second line ends in PÆTIN. AC.

- *578 var. of □ *ex pr.* AGAT AVG·L·Q

465 PomP IAN PAETINO

ET APRONIANO COS

a. 123

[*Ex pr(aedis) A*] *gat(hyrsi) Aug(usti) l(iberti)*, Q. [*Pom*]-*p(oni) Ian(uari)*.

AC.

- *579 476. The third word in line 1 is clearly SENIANIS.
The central emblem is a palm-leaf. AC.

- *580 509 ☉ HIB·ET·SISIN COS·EX PR a. 133
(corrected) VLP·VLPIANI
SAL

Hib(ero) et Sisin(na) cos. Ex pr(aedis) Ulp(i) Ulpiani, Sal(arese).

AC. This vindicates at least in part Nibby's reading reported, but discarded by Dressel (509, 2), who followed instead Melchiorri's copy of a defective example. The stamp agrees in style with the other stamps of Ulpianus.

- *581 536 a. Dressel's restoration is confirmed by copies found in Ostia in 1938 (read SER III ET VARO).

- *582 613 b ○ TEMP·SVCC FELIX·L·F
(completed) *ramus palmae*
(Tegula) Temp(esina) Succ(essana), Felix l(ibertus) f(ecit).
AC. Cf. 613 a and 188.

- 583 660. On the basis of 584 the second line of this stamp has to be read

VOITTELV

(This reading is not inconsistent with Dressel's description of 660, 1). The stamp runs then as follows: *Tonneian(a) Vic(ciana), Commu(nis) Atellior(um)* (scil. *servus*) *fec(it)*.

- *584 660/1 Form: horse-shoe COMMV ATELLIOR VP
Ostia 1938. The stamp is complete, but neither is it certain whether there are points between V and A, and between R and V (hence not indicated above), nor whether there is a P in ligature with V. A new examination of the original stamp is necessary. It would be simplest to read *Commu(nis) Atellioru(m)* (scil. *servi*). Cf. 583.

- *585 686. The discussion of stamp 686 found on a brick supporting a mosaic in the Musée de Brive leads M. Labrousse to inter-

esting conclusions (*Mél. d'archéol. et d'histoire* LV (1938), 89-95). The stamp had been interpreted by Dressel: *Op(us) dol(iare) ex pr(aedis) Aug(usti) n(ostri), fig(linis) Vocconia(nis) a Pel(), f(ecit) August(alis) Publ(ici) Cresc(entis)*.

Labrousse resumes the hypothesis advocated first by Marini that the *Figlinae Bucconianae* and *Voc(c)onianae* are identical (*CIL* XV 1, p. 22). The name of the *Figlinae Bucconianae* is found only on three stamps: 44 (time of Septimius Severus), 47 (203-205 A.D.), and 48 (209-211 A.D.), the *Vocconianae* occur for the first time probably under Marcus (685), after that they appear under Commodus (?), Severus and Caracalla (686-690). Almost a century later, with Diocletian's reorganization of the Roman brick-industry, the name of the *Officina Boconiana* or *Buconiana* recurs (1548-1560). If, in addition, one considers how frequent oscillations between Bellicius and Vel(1)icius, Vismatius and Bismatius, Vitalis and Bitalis, Venerius and Benerius, Verna and Berna are encountered, especially on brick-stamps, there can hardly be any doubt about the identity of the *Figlinae Bucconianae* and *Voc(c)onianae*.*

Already Marini referred to a bull of Pope Benedict VII of December 21, 978 (973 according to P. Kehr, *Italia Pontificia* II (1907), 77 no. 7), best published by L. Bruzza, *Regesto della Chiesa di Tivoli*, Rome, 1880-1886, 32 ff., in which the Pope confirms to the church of Tivoli among other possessions "*fundum Buccunianum quod est territorio Savinense*" (p. 36, 3). The name lives on in the *tenuta Boccone* in the region of ancient Ficulea and Fidenae (Labrousse, *loc. cit.*, p. 93), which shows where we have to look for the site of these brick-yards.

* In view of the existence of an independent *gens Bucconia* (*Thes. Ling. Lat.* II, p. 2229, 44 ff. offers the following material, which seems complete as far as the published indices of *CIL* are concerned: *CIL* XII 3480: *Bucconia Sige*; *CIL* XII 3623^{add.}: [*B*]uconia Severilla, both from Nemausus; cf. *Furius Bucconius* in the Roman inscription *CIL* VI 10243), Professor J. Whatmough is inclined to suspend judgment on this identification.

It is to the credit of Labrousse that he pointed to the inscription *CIL* XIV 4012 = *ILS* 5387 (from the same territory of Ficulea) where a M. Consius Cerinthus prides himself on having improved a road "*regione Ficulensi pago Ulmano et Transulmano Peleciano*." Labrousse sees in A · PEL of stamp 686 a more specific indication of the provenance of the brick: *fig(linis) Vocconia(nis) a Pel(eciano pago)*.

That there exist *f(iglinae) Caes(aris) n(ostri) pag(i) Stel(latini)* (390; for the name of the *pagus Stellatinus* cf. *CIL* XI 3040 = *ILS* 106), certainly strengthens Labrousse's opinion, which is even more recommended if one remembers the further analogy afforded by the *Figlinae Caepionianae ab Euripo* (cf. 106-108, 110, 36-37). That also in this case a locality is indicated, has been proved by the discovery of an inscription (Vaglieri, *NS* 1908, 327 = *CIL* VI 4, 3, 39087) in which the Euripus is mentioned besides the Tiber and a "*piscina*." The names *Figlinae ab pila alta, ab Isis, a Neptuno* and *a pila Herculis* (cf. 328) may be also recorded here.

- *586 736 ☉ EX·PRAE·L·AVRELI·VERI·AVG
(corrected) OFFI·M·LVRI IANV
Ex prae(dis) L. Aureli Veri Aug(usti), offi(cina) M. Luri Ianu(ari).
AC. The center of the stamp is blank.
- 587 745. The first line of this stamp ends: COCCEIA A.
Pellegrini, *NS* 1900, 618 no. 2 (Isola di Giannutri).
Interpret: *Ex fig(linis) Caes(aris) n(ostri) ab Cocceia A(uli) lib(erta) Primigeni(a)*.
- 588 794/5 ☐ SEXT·ANNI
Crostarosa, *NBAC* II (1896), 72 no. 72 (Rome, 2 copies).
- *589 903. Form: ○. There are points before and after SER.
AC (3 examples).

- 590 1084/5 □ TI CLAVDI
 SECVNDI
 □ APRILIS S

CIL XI 2, 1, 6689, 77 (Chiusi). This is the only stamp of Ti. Claudius Secundinus, *offinator* of Domitia Lucilla and later of M. Aurelius and Faustina, in which the name of a workman occurs: *Aprilis s(ervus scil. fecit)*.

- 591 1177/8 APRO ET PAE COS
(formerly 1530) □ HERCVL *litt. cavis* a. 123

J. B. Frey, *Corpus Inscriptionum Iudaicarum* I, 1936, 215, no. 40 (Rome). This copy proves definitely that the stamp belongs to the group of stamps of the slaves from the *Praedia Quintanensia* of Annius Verus (cf. 227). Therefore Hercu-
l(anus?) has nothing to do with M. Vinicius Herculaneus of 1529.

- 592 1191. Second line: AMPLIATVS *palma dextrorsum*
Crostarosa, NBAC III (1897), 223 no. 34 (Rome).

- 593 1400. Form: crescent with the horns squared off (like 980).
NS 1892, 115 f (Rome).

- 594 1410/1 □ T·SARI
Crostarosa, NBAC II (1896), 78 no. 102 (Rome). This man is probably identical with T. Sarius Secundus who appears in 347, a stamp *de (figlinis) Nar(niensibus)*.

- *595 1491/2 *in tabella* P VEDI HONESI
(cf. 2048) *ansata*
P. Vedi Honesi(mi).

This reading is based on the fragment 2048, which contains the right part of the stamp (now in the AC), on a fragment of the left part reported by Ashby on p. 379 of his copy of CIL XV 1 with the indication "SE of Mte Giove debris 11/3/06", and on another fragment of the left part given by Frey, *Corpus Inscriptionum Iudaicarum* I, 213 no. 15.

596 1492. On the basis of **595** this stamp can be read as follows:
Vedi O(nesimi).

1530; cf. above **591**.

LATERES URBANI SAECULORUM QUARTI, QUINTI, SEXTI (cf.
 1540-1731)

***597** var. of 1571. Same stamp as 1571, but written from right to left. *BL* II 151 (155) (Villa Adriana).

598 1580 c. Dressel's restoration is confirmed by Crostarosa, *NBAC* III (1897), 224 no. 40 (roof of SS. Silvestro e Martino ai Monti).

***599** 1583. Form: square with double margin. AC (The ornamental stamp reported in 1583 is lacking in this example).

From right to left:

600 1583/4 Form: octagon OFFICINA·DOMIT·
 Crostarosa, *NBAC* III (1897), 218 no. 2 (roof of SS. Silvestro e Martino ai Monti). 2129 a is probably identical.

var. of

***601** 1590 ○ M·P·D·R·S·F·F·O. *litt. cavis*
 (1592 completed)

Crostarosa, *NBAC* III (1897), 219 no. 6 (4 examples, roof of SS. Silvestro e Martino ai Monti), where O should be corrected into D, in spite of Crostarosa's protestations; *BL* III 93 (225) (Ostia, Terme sul Decumano), where the additional P (between D and R) probably should be eliminated. The latter example was found *in situ* in the same hypocaust with 1590, with which **601** is in wording identical, though it runs from right to left and is larger. Cf. 1590 for the interpretation of this stamp.

***602** 1593/4? See cut (Scale 1:2).

BL I 204 (64) (Forum of Caesar).

I fail to understand this stamp. It seems to belong to the *of(ficina) F.* (1589-1593). S. P. may stand for *s(ummae) p(rivatae)*.



- *603 1647 c. Form: octagonal, not circular as Dressel indicated.
SPASR I 52 no. 213, now AC.

From right to left:

- *604 1654/5 ○ OF M R S

Of(ficina) M R S().

BL II 151 (155) (Villa Adriana). Another copy of this stamp had been described by Bruzza whose reading was discarded by Dressel, 1654 b 9. That 604 is different from 1654 b was ascertained by a comparison of rubbings of both stamps. S is presumably the initial of a workman, as F in 1654 b stands for *For(tunati)* (1654 a).

- *605 a 1660/1 ○ AVGG·NN·

- *605 b Same stamp, but "*litteris cavis*."

One copy of a and b each: AC. Both stamps seem to belong to the fourth century and are related to 1661 [*dd. nn. = D(ominorum) n(ostrorum)*] which was found in Constantine's Arch of Malborghetto (Frothingham, *AJA* XIX (1915), 159).

- *606 var. of 1665 which is in wording identical with 1665 a, but written from right to left.

Crostarosa, *NBAC* II (1896) 60 no. 20 (3 fragments, roof of S. Maria Maggiore); III (1897), 230 no. 77 (2 copies, roof of SS. Silvestro e Martino ai Monti); a sixth copy is in the AC.

- 607** 1666. Dressel's restoration is confirmed by Crostarosa, *NBAC* III (1897), 224 no. 39 (roof of SS. Silvestro e Martino ai Monti) and Ed. Gatti, *BC* LIII (1925), 275 (Rome).
- *608** 1673. *Reg(nante) d(omino) n(ostro) Athalarico bon(o) R(omae)*. The same copy which was published by Gius. Gatti, *NS* 1888, 435 (Rome) is now in the AC. The last letter in line 2 is definitely R not RO. This reading has been confirmed by Gu. Gatti, who published another copy of the stamp, *BC* LXIII (1935), 193. Dressel's doubts were unfounded.
- 609** 1685/6 □ EX OF
DIGNI
TOSI
Ex of(ficina) Dignitosi.
Crostarosa, *NBAC* II (1896), 64 no. 35 (roof of S. Maria Maggiore).
- From right to left:
- 610** 1686/7 ○ EX F DONATI
monogramma?
Ex f(iglinis) Donati(ani).
Crostarosa, *NBAC* II (1896), 58 no. 13 (S. Maria Maggiore).
Cf. 1686.
- *611** 1693/4 □ OFIc
INOC
ENTI
Ofi[c(ina)] Inocenti(s).
SPASR I 56 no. 230 and pl. II 16; now AC.
- *612** 1694/5 ○ IOANNES FECit
crux circulo inscripta
Rome, in demolitions at S. Susanna, 1938.
- 613** 1705/6. Crostarosa, *NBAC* III (1897), 231 no. 78, published a drawing of a stamp found on the roof of SS. Silvestro e Martino ai Monti and gave Stevenson's interpretation (ap-

parently approved by him) which is in complete variance with the picture:

Stevenson: ☉ (from right to left) *ofic(i)na Qu(i)raci*.

Drawing: ☉ (from left to right) *oficina Victoris*.

- 614** 1709/10 Form: IOXLVNATVS SEVERIANI MAO
octagon

Fortunatus Severiani mag(istri).

Wilpert, *NBAC* IX (1903), 318 (Cemetery of SS. Marco Marcelliano e Damaso, Rome); cf. the fragment published by Gius. Gatti, *BC* XXX (1902), 71 (Via S. Prassede n. 27, Rome). Cf. **615**.

- *615** 1710. Form: octagon. *Martinus Severiani ma[g(istri)]*.
AC. This is the same fragment which Dressel published as circular. It is completed on the basis of **614**. For other stamps of Severianus cf. 1639 and 1648 (where a D() is working under him in the *officina Tempesina* and *Terentiana* respectively) and 1709.

CONCORDANCE BETWEEN THE CORPUS INSCRIPTIONUM LATINARUM AND THIS SUPPLEMENT

In the following concordance XV 1, etc. stand for *CIL* XV 1, etc., B for the supplement.

XV 1	B	XV 1	B	XV 1	B
21	4	102	34	219	51
34	12	106 b	36	229 b	184
37	11	109	39	234	177
39	15	135	43?	241	571
60	23	154	44	249	55
64 b	24	160	45	268	59
90 a	30	189	570	281 b	62
90 b	31	198	48	286	69
92 b	569	208	50	287	14

XV I	B	XV I	B	XV I	B
291	70	603	169	1117 a	503
294	572	604	171	1119	288
306 c	77	605	178	1126	289
308	549	608	170	1151	294
309	78	613 b	582	1155	339
320	84	614	176 a	1161	300
326	575	617	cf. 278	1176	317
341	89	622	189	1191	592
346	90	640	192	1212 b	321
357	526	660	583	1234	329
377 c	95	672	203	1256	207
384	96	686	585	1258	331
394	97	723	214	1268	333
396	99	736	586	1280	336
411	103	745	587	1283	521 a
412	104	809 a	413	1287	cf. 527 b
420	107	851	237	1293	cf. 530
423	108	859	239	1324	343
448	111	901	243 = 473	1328	344
457	576	903	589	1355	477 A
460	117	ad 918	477 b	1358	307
465 b	577	922	250	1372	356
476	579	ad 943	568	1379 b	358
486 b	124	954	cf. 125	1387	363
488	129	964	562	1400	593
489	130	978	303	1411	cf. 544
493	133	984	cf. 484	1413	373
497	134	1052	cf. 277	1453-5	cf. 18
502 b	140	1056	279	1491	cf. 559
503	136	1077 a	281	1492	596
509	580	1092	282	1497	392
511	cf. 144	1093	499	1501	cf. 393
536 a	581	1094 g	500	1514	396
540	153	1094 h	501	1520	} 399
581	163	1099	284	1524	
600 a	166	1115 c	287	1525	401

XV I	B	XV I	B	XV I	B
1526	400	2012	296	2443	300
1530	591	2013	365	2444	301
1532	cf. 403	2017	227	2445	302
1580 c	598	2029	145	2449	cf. 538
1583	599	2034	375	2451	508
1592	601	2036	187	2462	cf. 520 b
1647 c	603	2042	223-5	2465	cf. 527 b
1666	607	2048	595	2468	cf. 531
1673	608	2049	353	2474	533
1710	615	2052	388	2482	cf. 496
		2068	212	2485	493
1746	42	2069	35	2487	540
1775	54	2071	41	2503	556
1778	67	2074	65	2506	558?
1787	2469	2101	437	2508	cf. 82-3
1809	121	2129 a	600?	2556	567
1810 b	cf. 123				
1812	143	2156	409		
1834	cf. 135	2158	410	I 2, 1 ²	B
1841	165	2159	411		
1842	182	2169 a	423		
1846	202	2207	442	2296	445
1870	116	2212	139	(cf. I 2, 2 ² , p. 737)	
1871	3	2215	427	2303	477 A
1880	227	2219	424 a	2314	306
1894	304	2227	446	2351	553
1942	273	2228	447		
1945	426	2241	449		
1947	190	2250	376	VIII S 3	B
1973	343	2270	451		
1975	342	2381 a	457	22632, 13	22
1985	352	2393	459	16	41
1986	cf. 352	2397	460	57	264
1993	366	2403-II	cf. 465	60	427
1995	439	2415	466	22636, 2	499
2009	332	2425	cf. 477 b	6	534

X 2	B	X 2	B	XI 2, 2	B
8042, 5,		31	547	26	563
87, III cf.	465	32	548	6705, 5	477 b
8047, 15	307	33	514	8109	409
17	549	34	515	8110	388
8048, 1	467	35	516	8114, 2	480
3	475	36	517	3	510
4	476	37	518	8	558
5	481	38	519	8115	496
6	488	39	520 a		
7	489	40	522 a	XIV S I	B
8	501	41	526		
9	490	42	527 b		
10	482	43	529	5308, 1	1
11	498	44	554	2	209-10
12	483	45	555	3	410
13	484	46	560	4	411
14	485	47	562	7	413
15	492	48	561	10	38
16	486 a	8056, 127	491	(12	919)
17	499	260	2480	16	461
18	491	370	2509	(17	2243 b)
19	507			21	414
20	508	XI 2, 1	B	22	415
21	511			24	424
22	521 a	6689, 77	590	25	309
23	530	240	442	26	306
24	531	6691, 9	479	29	324
25	532	10	505	(31	2408)
26	487	17	535	33	438
27	542	21	552	36	141
28	543	22	553	37	139
29	545	23	556	38	138
30	546	24	557	39	440

CONSPECTUS OF CONTENTS

The first column of numbers refers to *CIL XV 1*, the second to those of the supplement. F. stands for *Figlinae*, P. for *Praedia*, and Of. for *Officina*.

PARS I. LATERES	1-2415	1-466.	568-615
CAPUT I. LATERES PUBLICI	1-8	1-2	
CAPUT II. LATERES URBANI PRIVATI			
EX OFFICINIS NOMINATIS	9-690	3-207.	568-585
P. Aiaciana	9-10	393?	
F. Albanianae		3	
F. Antul(lianae)		568	
F. Arestianae	11-12		
F. Astivianae	13-14		
F. Avitianae	15-17		
F. Brutianae	18-43	4-20	
F. Bucconianae	44-48	21	
F. Caelianae	49-51	22	
F. Caepionianae, etc.	52-111	23-39.	569
F. Camillianae	112-115	40	
F. Caninianae	116-140	41-43	
F. Castricianae	141		
P. Centurion(ica)	142		
F. a Creta	143		
F. Curtianae	144-147		
F. Domitianae, Veteres, Novae	148-206	44-49.	570
F. ab Euripo	106-110	36-37	
F. Fabianae	207-210	50	
F. Faunianae	211		
F. Favorianae	212-222	51-53	
F. Fulvianae	223-226		
F. Furianae	227-236	186	
F. Genianae	237-244	54.	571
F. Germ(), Cerm()	245-247		

F. ab Isis	248-255	55-58
F. Iviliniana	256	
F. Iunciana	257	
De Lic(inianis)	258-279	59-60
F. Lusiana	280	61
F. Macedoniana	281-300	62-71. 572
P. Mamm(eiana)	301	
F. Marciana	302-329	72-85. 549. 573-575
	1787. 2469-2470	
F. Med()	330-331	
F. ad Mercurium Felicem	332-334	86
F. Muciana	335-337	
F. Mulionis	338-340	
F. Myriniana	341-342	87-89
F. Naeviana	343-346	90
F. Narnienses	347-353	91
F. Negariana	354	
F. ab Nept(unio)	355	92-93
Of. Neroniana	356	
F. Novae	200-206	49
F. Oceanae, Ociana	357-388	94-96. 526. 536
F. Ocriculana	389	
F. Pag(i) Stel(latini)	390	
(Of.) Petroniana	391	
F. ab pila alta	111	
P. a pila Herc(ulis) (?)	1227-1230	326. 328
F. Plataniana	392-397	97-101
F. Ponticulana	398-407	102
Portus Licini	408	
Portus Parrae	409-412	103-104
F. Pot()	413-414	
F. Propetiana	415-419	105-106
F. Publiliana	420-436	107-108
F. Quintiana	437-442	109-110
P. Quintanensia	443-470	111-118. 576-578
F. Rhodiniana	471-474	119

Opus Sabinum	530-532	151-152
F. Saenianae	475-477	579
Opus Salarese	478-532	120-152. 580
F. Sef()	533	
F. Septimianae	534-538	581
F. Sext()	539-540	153
P. Staton(iensia)	541	
F. Strab(onianae)		83
P. Subortana	542-547	154-157
Doliare Successa(num)	615	188
F. Sulpicianae	548-600	158-168
F. Superiores	601-602	
F. Tempesinae, etc.	603-615	169-188. 582
F. Terentianae	616-630	189-190
F. Tonneianae, Vicianae	631-673	191-204. 583-584
F. Tur()	674	
F. Varianae	675	
Opus Vesianum	654-655	
F. Veteres	188-199	48. 570
Of. quae est via Aurelia	676	
F. Via Nomentana	677-682	205
(Of.) de via Salaria	683	206
(Of.) Via Triumphali	684	207
F. Vicianae	663-673	200-204
F. Voc(c)onianae	685-690	585

CAPUT III. LATERES URBANI PRIVATI

RELIQUI AETATIS MELIORIS	691-1539	208-408. 586-596
Lateres imperatorum	691-774	208-217. 586-587
Lateres privati reliqui	775-1539	218-408. 588-596
Lateres gentis Domitiae	979-1120	265-288. 590

CAPUT IV. LATERES URBANI AETATIS

DIOCLETIANAE ET POSTERIORIS	1540-1731	597-615. 466
Of. Boconiana	1548-1560	
Of. Brit()	1561-1562	

Of. Claudiana	1563	
Of. Cr()	1564	
Of. Domitiana	1565-1588	597-600
Of. F()	1589-1593	601-602
Of. Fabiana	1594-1599	
Of. Fauriana	1600-1601	
Of. Furiana	1602-1605	
Of. Gemella	1606-1607	
Of. Iobia	1608-1612	
Of. Marciana	1613-1619	
Of. Nova	1620-1621	
Of. Ocen()	1622	
Of. Pub(liana), Pul(liana)	1623-1626	
Of. Q()	1627	
Of. T() Q()	1628	
Of. Teb()	1629	
Of. Tempesina	1630-1641	
Of. Terentiana	1642-1648	603
Lateres reliqui	1540-1547	
	1649-1731	604-615. 466
Lateres imperatorum	1656-1662	605
Lateres regum Gothorum	1663-1675	606-608

CAPUT V. LATERES URBANI FRAC TI

VEL MALE EXCEPTI	1732-2155
------------------	-----------

CAPUT VI. LATERES SUBURBANI 2156-2415 **409-466**

Lateres Ostienses et reliqui litoris

suburbani	2156-2223	409-444
-----------	-----------	----------------

Lateres Tusculani, Albani, Lanu-

vini	2224-2290	445-451
------	-----------	----------------

Lateres Praenestini

2291-2376	452-456
-----------	----------------

Lateres Tiburtini

2377-2395	457-459
-----------	----------------

Lateres externae originis

2396-2415	460-466
-----------	----------------

PARS II. DOLIA, PELVES,

ARCAE	2416-2557	467-567
-------	-----------	----------------

THE MISSING PORTIONS OF THE *COMMENTUM EINSIDLENSE* ON DONATUS'S *ARS GRAMMATICA*

BY JOHN PETERSEN ELDER

IN 1870 Hagen completed Keil's monumental *Grammatici Latini*¹ with a 'Supplementum' entitled *Anecdota Helvetica*, an always interesting and often valuable collection of later grammatical works found in Swiss MSS. In this mélange Hagen published from a single MS., Einsidl. 172 (s. X), an anonymous commentary on Donatus's larger edition of his *Ars Grammatica*,² under the title of *Commentum Einsidlense*.³ As ultimate author Hagen suggested that unhappily little known but much talked about (and perhaps much abused) contemporary of John the Scot and Martin of Laon, the teacher Remigius of Auxerre.⁴ Hagen's suggestion of Remigius was, I believe, correct.⁵ The commentary itself, while hardly likely to make the heart

¹ H. Keil, *Grammatici Latini* (Leipzig, 1857-80), I-VII, hereafter referred to as GLK.

² GLK IV, 367-392.

³ *Anecdota Helvetica* (hereafter referred to as *Anec. Hel.*) 219-266.

⁴ *Anec. Hel.* pp. CVII-CX and p. CXIV, whom Manitius, *Gesch. der lat. Lit. des Mittelalters* (München, 1911), I, 507 followed.

⁵ Hagen unconsciously adduced one striking bit of evidence in favor of ascribing the *Comm. Einsidl.* to Remigius. While discussing (*Anec. Hel.* p. CXII) the question of Remigius's possible authorship of the Donatian commentary in *Bern.* 386, Hagen cited a passage (already cited by C. Thurot, *Notices et Extraits des Manuscrits de la Bibliothèque Impériale*, Paris, 1868, p. 507) from Alexander de Villa Dei in which Remigius, by name, on Donatus's larger *Ars* is quoted. Since Hagen did not find the passage in *Bern.* 386, he dropped the matter. Almost the same words, however, are found in the *Comm. Einsidl.* (*Anec. Hel.* 257, 31-33). More impressive is the fact that the anonymous commentary on Persius in cod. Laur. (s. XIII) plut. XXXVII, 20 (O. Jahn, *Auli Persii Flacci Satirarum Liber*, Leipzig, 1843, p. CLXII) quotes Remigius's unusual explanation of *nepa* ("Ut dicit Remigius *nepa* est quidam serpens, qui fetus suos devorat, cum famescit, inde *nepos* dicitur, quasi patrimonium consumens et devorans sive dissipans."); the same derivation is found twice in the *Comm. Einsidl.* (cf. *infra* p. 140 and p. 152). Sedulius of Liège, too, comes into the picture, since his commentary on Donatus's larger *Ars*, of which regrettably few extracts were published by M. Esposito, "A Ninth-Century Commentary on Donatus," *Class. Quart.* XI (1911),

beat faster, is an important document for students of classical and mediaeval letters for the enlightening picture it gives us of the information (and misinformation) available to a teacher of the ninth or tenth century, as well as of his pedagogical methods.

Hagen realized that in several places a good number of folia had been lost from his Einsiedeln MS. These lacunae he generally noted in his *apparatus criticus* by some such dolorous remark as "fato iniquo disiectis grammatici membris aliquot folia prorsus interierunt." Also, as he carefully pointed out in each instance, his MS. was frequently so corroded as to be unreadable. All these lacunae, however, are filled in by a Vatican MS., *Reg. lat.* 1560,⁶ as well as several brief and hitherto unsuspected omissions caused by *homoeoteleuta* or *homoeoarcta*.

In this study I fill the gaps in Hagen's text from *Vat. Reg.* 1560. In the infrequent spots, too, where Hagen emended his Einsiedeln

94-97, offers close parallels with the *Comm. Einsidl.*; cf. Esposito's extract from fol. 12^a (p. 95) with my text on p. 142 *infra*. Since John the Scot is quoted (see p. 156 *infra*), this time he is ruled out as a candidate for authorship. No conclusion on authorship can be hazarded from stylistic comparisons until more of Remigius's works are published — *in toto* and not in extracts. The news that Professor Cora Lutz will follow up her excellent editions of John the Scot and Dunchad on Martianus with Remigius on Martianus is indeed welcome. One final point for those who may apply stylistic tests: the author of the *Comm. Einsidl.*, unlike John and Dunchad, interweaves his lemmata with his comments so as to form a fairly smooth and continuous text.

⁶ I studied this book in Rome in 1939 while travelling as a Sheldon Fellow of Harvard University. I am glad for this opportunity to express my appreciation to Harvard for the award of that fellowship. A thorough palaeographical description of this MS. would be a lengthy study in itself, since it is composed of several once independent books. Such a study I hope to present when publishing from this book Remigius's (?) commentaries on Bede's *De Arte Metrica* and *De Schematibus et Tropis Sacrae Scripturae*. For the present it will suffice to note: the sections of the MS. containing the *Comm. Einsidl.*, according to Dom Wilmart in conversation, were written at Fleury at the end of the ninth or beginning of the tenth century. Script is Carolingian; there is only one hand at work; ruling is 'New Style.' I possess photostats or microfilms of the entire book. *Monac.* 17210 (s. XIII) appears also to furnish the text of the *Comm. Einsidl.*; my brief examination of this book in June, 1939, did not allow me thoroughly to check its completeness.

text, I cite the corresponding reading of the Vatican text. No variant readings are offered for the text which Hagen has published, since that text, as determined from my collation, is satisfactory. To quibble over unimportant variants would be only a waste of time and print.

The texts of the Einsiedeln and Vatican MSS. are substantially the same. To illustrate this conclusion, I give from my collation of *Reg.* 1560 with Hagen's text a comparison of their readings for three sections of fifteen lines each of Hagen's edition:

Anec. Hel. 222, 1-15:

1. dicuntur — unciales] *om.* V (*per homoeoteleuta*); 2. uncia] untia *ut saepe* V; 4. σύμματα] symmata (*quod auctor sine dubio scripsit*) V / tonsae] tunsae V / Scotti] Scoti V / etiam] *om.* V; 5. dictae] dicte *ut saepe* V; 6. littera] litera *ut saepe* V / litteram] literatam V; 7. antiqui] ipsi V; 9. littera] lite V; 10. colligitur] intelligitur V; 13. character] caracter V / Igitur si] si igitur V; 15. atomus] athomus V / Atomus autem dicitur] dicitur autem athomus V.

Anec. Hel. 243, 1-15:

1. Nugigerulus] nuigerulus V / portitor] portior V; 2. Imperterritus] inperterritus *ut saepe* V; 4. dicuntur] dicunt V / domus vel munitiones] munitiones vel domus V; 7. De casibus] *om.* V / cadit] cadat V / alterum] alium V; 8. quinque sunt] sunt V V; 10. requirimus] recepinus V; 11. Genetivus] genitivus *ut saepe* V; 12. generis relativus] genere lativus V; 13. etiam] et *add.* V; 15. equus est iste] est iste equus V.

Anec. Hel. 258, 1-15:

1. frequentativa tamen forma non potest esse, quia tertiae coniugationis est] frequentativam formam tantum habet V; 4. ex]est ex V; 6. habet] habent V / illumino] illomino (*corr.*) V; 8. accipit] accepit V; 10. Facesso] facesco V; 11. declinentur] declinantur V; 12. illi] id est manifestum est *add.* V / me] te *add.* V *quod legendum est.* / id est] *om.* V; 14. DE ADVERBIO] *om.* V; 15. posuit] adverbium *add.* V.

Finally, a few words on *sigla* and editorial method. K=Keil's *Grammatici Latini*, H=Hagen's *Anecdota Helvetica*, V=cod. *Vat. Reg. lat.* 1560, E = cod. *Einsidl.* 172. Angular brackets indicate my additions to the text. Many corners are torn off from the MS., and consequently a number of conjectures will be found. Unless the *apparatus criticus* expressly states the reason for a lacuna, it is to be assumed that it has been caused by a torn off corner. In all such

cases my conjectured reading will give a fair picture of the length of the lacuna. Square brackets indicate excisions from the text. Italics are used for lemmata from Donatus, double quotation marks for direct quotations, and single quotation marks to set off key words. When a lacuna in a passage which Hagen incorporated into his text from the margin of his MS. is not filled below, it is to be assumed that this passage is not found in *V* (and probably should not have been inserted in the text by Hagen). I have employed classical orthography and have not noted in the *apparatus* such usual mediaevalisms as *e* for *ae*, *ae* for *e*, *ē* for *ae*, *ti* for *ci*, *ci* for *ti*, *y* for *i*, *i* for *y*, *f* for *ph*, *ph* for *f*, omitted and superfluous *h*, and matters of assimilation and dissimilation. I do this both for clarity's sake and because I know of no way of distinguishing between the spellings of author and scribes. As for Greek, the author knew none in the original; his Hellenisms plainly came from Jerome, Cassiodorus, Isidore, and the early grammarians. I have retained, therefore, the Latin spellings as the MS. gives them; where the distortions are extreme, I have suggested the Greek original in the *apparatus*.⁷

A. *Passages where Hagen notes a lacuna in his text:*

226,17 H (1) 'Eibam' in ***** posuisse creditur] *Hagen*
368,24 K Et ideo eam in fine posuisse creditur *V*

228,31 H (2) Quidam enim sunt simplices *****et proprietatem]
369,18 K *Hagen* Quidam enim sunt simplices,¹ quidam vero sunt compositi id est duplices, vel aliter quibusdam pedibus superponuntur duae vel tres virgae id est lineae longae sicut spondeo et molosso, et aliis duae breves vel tres virgulae sicut pyrrichio et tribrachyo. Duae virgulae aequaliter directae sicut in spondeo significant quattuor tempora. Duo semicirculi sicut in pyrrichio significant duo tempora. 'Metron' Graece mensura Latine. Inde metrica ars dicitur a mensurando eo quod nulla alia res ita possit denumerare syllabas tempora litteras sicut ars metrica. *Pedes disyllabi* id est duas

⁷ I am grateful to my friend Dr. Van Courtlandt Elliott for his patient help and profitable suggestions in connection with this study.

¹ simplices] ut sunt dissyllabi et trissyllabi ss. *V*²

syllabas habentes *sunt quattuor*: quare non plures vel pauciores fuerunt quia duae syllabae non possunt habere extra quattuor schemata id est figuras; aut enim erunt ambae breves ut in pyrrichio, aut ambae longae ut in spondeo, aut una brevis et altera longa ut in iambo, aut una longa et altera brevis ut in trocheo. Similiter *trisyllabi* non potuerunt esse plus quam *octo* quia tres syllabae non possunt habere extra octo schemata. *Duplices* id est quattuor syllabas habentes *sedecim*. *Pyrrichius* dictus est a 'pyra' id est ab igne. 'Pyr' enim vel 'pyros' Graece ignis dicitur Latine. Iste enim pes ad instar flammae acute elevatur et cito decedit. Vel *pyrrichius* dicitur a Pyrrho, Achillis filio, qui ad tumulum patris sui hoc pede carmina componebat. Dicitur etiam *pyrrichius*, ut Sacerdos² [pyrrichius] dicit, a pyrricha, genere ludi. Sive etiam *pyrrichius* dicitur quasi 'puerichius' quia pueri in suis iocis hoc pede utebantur. *Fuga* id est velocitas vel vere fugitivus.³ *Spondeus* dicitur 'apo tu spondaizon' id est a sono nomen accepit, vel a tractim sonando; tractim enim circa aures sacrificantium personabat. Tractus etiam quidam dicitur *spondeus* ob longitudinem sui; dicitur etiam et sacrificalis quia in suis sacrificiis eo utebantur gentiles. Nam et hi qui fistulas caneb(ant)⁴ spondiales vocabantur. Nam et in quadragesimalibus diebus prolixus can(tus)⁵ vocatur tractus. *Iambus* dicitur a Graeco quod est iambuzun⁶ id est a detrahendo ve(l)⁷ male dicendo. Antiqui enim poetae et histriones hoc pede aemulis suis detrahebant vel male dicebant. Vel *iambus* dicitur a Iambe, Thressa⁸ muliere, filia Cele(i),⁹ quae Cereri apud patrem suum hospitanti hoc pede gratissimum risum excitavit. *Parens* id est pater vel mater. 'Trochos' Graece rota Latine. Inde *trochaeus* dicitur rotatilis quia sicut rota ab inferioribus partibus tractim incedit et in anterioribus volubilius labitur, ita iste pes a longa syllaba incipit et in brevi terminatur. *Meta* id est terminus vel finis. 'Tris' Graece tres Latine; 'brachian' vel 'brachis' brevis.

² Sacerdos] GLK 6,497,17

³ fugitivus] fuget V

⁴ caneb(ant)] post b, ut post n in can(tus) (adn. 5) et post e in ve(l) (adn. 7) et post le in Cele(i) (adn. 9) nonnullae litterae putredine evanuerunt.

⁵ vide adn. 4.

⁶ iambuzun] sc. ιαμβίζειν

⁷ vide adn. 4.

⁸ Thressa] trassa V; cf. Audacis Excerpta, GLK 7,334,15

⁹ vide adn. 4.

- 369,²⁴ K Inde *tribrachys* dicitur eo quod tres syllabas habeat breves ex ratione temporum vel ex sui natura. *Macula* ruga vel vitium corporis. *Molossus* dictus est a Molosso inventore suo vel a Molossia insula ubi primum repertus est vel a Thessalis qui per gentes ad bellum modulatione istius pedis utebantur ut terrorem hostibus incuterent, qui dicti sunt Molossi a Molosso principe. Dictus est namque *Molossus* a quodam Molosso sene qui saltando circa aras iram deorum mitigabat. Unde et quidam "Omnia prospera,¹⁰ saltat senex".¹¹ Molossi etiam dicuntur canes nobilissimi id est segusii¹²
- 370,¹ K quia in Molossia reperti sunt. *Aeneas* filius Anchisae. 'Ana' Graece sursum vel 're' Latine. 'Pestin'¹³ percutere. Inde *anapaestus* dicitur reperiens quia repercutitur a dactylo. Quod enim *anapaestus* habet in capite hoc habet *dactylus* in fine. *Erato* una est ex novem musis et interpretatur inveniens simile.¹⁴ 'Dactylon' Graece digitus Latine. Inde *dactylus* dicitur digitalis quia sicut digitus ex longa iunctura et duabus brevibus constat, ita et iste pes a longa syllaba incipit et in duabus brevibus terminatur.
- 370,² K *Maenalus* mons est Arcadiae; idem est et Maenala sicut Gargarus et Gargara. 'Amphi' Graece circum Latine. 'Brachian' brevis. Inde *amphibrachys* dicitur eo quod in circuitu habeat breves syllabas et in medio longam. *Carina* parva navis sed proprie fundus navis dicitur et pro toto ponitur. 'Macron' Graece longum Latine. Inde *amphimacrus* dicitur eo quod in circuitu habeat longas syllabas et in medio brevem. Nam et 'mucronem' dicimus longum gladium. *Insulae* sunt habitationes in mari et dicuntur insulae eo quod in salo sint positae. *Bacchius* dicitur a Baccho id est a Libero patre qui primus fertur vitem repperisse cultumque eius hominibus dedisse. Nam antiqui in suis sacrificiis autumnali tempore collectis vindemiis hoc pede carmina scribebant. *Achates* fluvius Siciliae in quo repperitur gemma eodem nomine dicta. Et
- 370,³ K
- 370,⁴ K
- 370,⁵ K
- 370,⁶ K

¹⁰ prospera] sint ss. V²

¹¹ "Omnia . . . senex"] cf. Serv. ad A 3,279 "unde et natum proverbium est 'omnia secunda, saltat senex'" et A. Otto, *Die Sprichwörter und sprichwörtlichen Redensarten der Römer* (Leipzig, 1880), pp. 317-18

¹² segusii] *Whatmough* (cuius *The Prae-Italic Dialects of Italy*, Cambridge, Mass., 1933, II, 193 vide) secutii V

¹³ 'Pestin'] sc. ex *παλιν*

¹⁴ simile] *Mythogr. Vat.* 2,24,31 similem V

ferunt quidam quia eam si quis secum habuerit graciosus erit apud seniores. Inde et armiger Aeneae Achates dictus est id est graciosus. 'Anti' Graece contra Latine. 'Palin' iterum. Inde *antibacchius* vel *palimbacchius*¹⁵ dicitur contrarius baccho quia ubi ille habet syllabam brevem iste longas, et ubi ille longas iste brevem. Natura generale nomen est omnium rerum quae videntur et quae mortalibus latent. 'Deus' etiam dicitur natura eo quod omnia nasci faciat. Inde et quidam "Crede mihi, res nulla manet sine me moderante". *Duplices* pedes dicuntur quia ex duobus pedibus constant. Duas enim disyllabas continet unus quisque in se. 'Pros' Graece ad Latine. 'Celeuma' dicitur carmen navale vel vineale quo nautae vel vinitores se in vicem cohortantur. Inde *proceleumaticus* dicitur eo quod aptus sit ad tale carmen componendum. *Avicula* parva avis. 'Di' duo; inde *dispondeus* dicitur quia ex duobus spondeis constat. *Oratores* facundi eloquentes faceti lepidi. *Diiambus* ex *duobus iambis*. *Propinquitas* vicinitas¹⁶ vel consanguinitas. *Ditrochaeus* ex *duobus trochaeis*. *Cantilena* id est dulcis sonus vel carminum modulatio. *Antispastus* dicitur eo quod contrarius sit suis spatiis. Constat enim ex duobus contrariis id est iambo et trochaeo. *Saloninus* Pollionis filius fuit, qui Saloninus dictus est a Salonis¹⁷ civitate Dalmatiae quam pater eius Pollio expugnavit in illius nativitate. *Choriambus* constat ex chorio¹⁸ id est trochaeo et iambo. Trochaeus enim dicitur chorius eo quod aptus sit choris dextro videlicet vel sinistro. Ex eo enim compositi sunt hymni Ambrosiani. *Armipotens* potens in armis. Ionici dicuntur ab Ione inventore. 'Tonicos' Graece inaequalis¹⁹ Latine. Inde ionici dicuntur inaequales. *Minor* enim dicitur qui duas breves²⁰ habet in capite, *maior* qui duas longas. *Diomedes* dux Graecorum. *Iunonius* scilicet ales; ipse est pavo. Nota est fabula: Iuppiter concubuit cum Isione,²¹ filia Inachi regis; quod Iuno sentiens irata est et eam convertit in vaccam et imposuit ei oestrum, genus muscae gravissimae, qui eam insequeretur. Deinde ipsa ad Aegyptum

¹⁵ vel *palimbacchius*] cf. GLK 4,370,6 et app. crit.

¹⁶ vicinitas] alicui, rei ss. V²

¹⁷ Salonis] saloas V

¹⁸ chorio] choruo V

¹⁹ 'Tonicos' . . . inaequalis] cf. Isid. Orig. I,17,17

²⁰ breves] constat enim ex pirrichio et spondeo ss. V²

²¹ Isione] sc. Ione

fugiens transivit mare et ideo Ionium²² mare vocatur ab ipsa²³ Isione. Vocatur et Bosphorum quasi a bove perforatum. Deinde pristina imagine recepta in Aegypto facta est regina et dicta est nomen²⁴ Isis. Sed Iuno timens ne iterum Iuppiter coiret cum ea imposuit ei Argum custodem centum oculos habentem. Quem Iovis²⁵ interfecit per Mercurium et iterum Iuno resuscitavit eum et convertit in pavonem. Unde et sui oculi apparent in eius penis. Inde Iunonius ales dicitur pavo. 'Paeones' dicuntur a Paeone
 370,16 K repertore id est Apolline qui *Paeon* vel *Paeon* dictus est. A quo et Paeonia herba dicitur; hinc est illud "Paeoniis revocatum herbis et arte²⁶ Dianae".²⁷ Quibus longitudo syllabarum dedit numerum et ordinem. Nam ille primus dicitur qui primam habet longam,
 370,17 K secundus qui secundam, sic de aliis. *Legitimus* dicitur lege tentus id est qui lege tenetur. 'Legitima res' dicitur lege auctorata et legalis. *Colonia* ipsa possessio vel manus. 'Colonus' autem a colendo
 370,18 K dicitur. *Menedemus* proprium nomen apud Terentium. *Celeritas*
 370,20 K agilitas velocitas; *celeritas* autem dicitur animorum, velocitas
 370,21 K pedum. *His contrarii sunt epitriti* quia illorum syllabas breves, isti habent longas. 'Epi' Graece super Latine. "Tris" dicunt illi
 370,21 K quod nos dicimus tres. Inde *epitriti* dicuntur 'super trini' quibus brevis syllaba dedit numerum et ordinem. Nam *primus* dicitur
 370,22 K qui primam habet brevem; sic et ceteri. *Sacerdotes* id est sacrum
 370,23 K dantes. *Conditores* urbium aedificatores vel instructores. Unde
 370,24 K etiam Deus dicitur conditor orbis qui illum condidit. *Demosthenes*
 370,26 K cuiusdam nomen philosophi. *Fescenninus* nomen oppidi ubi primum reperta sunt fescennina id est carmina amatoria. Inde et
 370,27 K Vergilius²⁸ "hi Fescenninas acies aequosque Faliscos". *Ex his* subaudis pedibus supradictis id est ex disyllabis cum trisyllabis et ex trisyllabis cum se ipsis, quod patenter insinuat cum inferius addat *nam quem ad modum*. 'Synzugiae' id est coniunctiones pedum. 'Sinzuga' Graece coniungo Latine. Quidam *pedes alii* synzugias nominare volunt. Sed iste vocat pedes quia inest eis

²² Iunonium V²³ ipse V²⁴ nomen] nominis V; cf. D. Norberg, *Beiträge zur spätlateinischen Syntax* (Uppsala, 1944), 14-15.²⁵ Iovis] sic V fort. recte.²⁶ arte] amore codd. Verg.²⁷ "Paeoniis . . . Dianae"] Verg. A 7,769²⁸ Vergilius] A 7,695

aliquid quod in pedibus habetur, videlicet certus numerus syllabarum. Synzugiae tamen rectius appellantur. *Quem ad modum* id est sicut *pedes quattuor*. Dicitur ergo synzugia pes copulationis quia ibi copulantur pedes et syllabae plures. *Geminati* id est duplicati. *Reperitur* id est invenitur. *Trina* id est in tribus divisa. *Conditio* id est formatio vel lex. *Excepto* id est separato segregato. Amphibrachys et epitritus ideo separantur quia in trina divisione non inveniuntur. Amphibrachys triplam habet divisionem quia in arsi tria tempora ponuntur et in thesi unum ponitur, vel in thesi tria et in arsi unum.²⁹ *Metrici* id est metra facientes. *Informem* id est impositum et *inconditum*. *Iudicant* id est ¶consentur³⁰ arbitrantur. *Quorum alterum*, id est *amphibrachyo*, *tripla divisione partimur* ut supra diximus, *alterum*, id est *epitrito*, *epitrita divisione*. Epitriti vero, id est 'super trini', epitritam habent divisionem quia quando arsis habet quattuor tempora thesis habet tria, et quando thesis quattuor arsis tria; et ideo est epitritae divisionis. Dicitur ergo epitritus numerus quando maior numerus continet in se minorem totum et insuper eius tertiam partem. Nam quaternarius ternario comparatus totum habet in se ternarium et eius insuper tertiam partem id est unitatem. Isti ergo pedes informes dicuntur et inconditi, non ut penitus careant forma et conditione quoniam unus est in forma et conditione tripla, id est amphibrachys; alter vero, id est epitritus, in epitrita, sed quia non sunt ita formati sicut reliqui. *Aequa divisio est* quando arsis tot habet tempora quot et thesis. Nam unus uni comparatus aequales erunt. Aequaliter enim dividunt tempora. In qua divisione sunt pyrrichius spondeus anapaestus dactylus proceleumaticus dispondeus diiambus ditrochaeus antispastus choriambus. Isti itaque pedes aequae divisionis sunt quia per unum quemque illorum tot habet tempora arsis quot et thesis. *Dupla divisio est* quando arsis duplo vincit thesin vel vincitur a thesi ut est in trochaeo et iambo, tribrachyo et molosso, et in duobus ionicis. Et enim maior numerus

²⁹ unum] ternarius autem unitati comparatus secundum arethmeticam triplus est rationem in marg. add. omissionis signo V²

³⁰ ¶consentur] fort. consentiunt vel censent vel consentienter legendum est.

- totum habet in se minorem et eius quantitatem. Nam binarius unitati comparatus totum habet in se unum et eius quantitatem.
- 370,34 K *Sescupla* divisio est quando arsis totum habet in se thesin et eius medium. 'Sescum' ³¹ enim Graece ³² medium sonat Latine. In arithmetica divisio ista vocatur 'sesquialtera' quando maior numerus totum habet in se minorem et eius medietatem ut ternarius ad binarium; sicut sunt Paeones amphibrachys bacchius et anti-bacchius. In istis ergo *sescupla divisio* est quae ab aequo unum plus habet et a duplo unum minus. 'Ab aequo' ³³ id est 'ab aequa' ³⁴
- 370,35 K divisione' et 'a duplo' id est 'a dupla divisione.' *Legitimi* id est naturales legales ut in heroico dactylus et spondeus. *Nothi* id est adulterini semiliberi qui non recte ponuntur in metro sicut trochaeus qui aliquando solet poni in fine versus heroici pro spondeo. Ex ea enim parte qua primam syllabam habet longam, videtur esse liber; in hoc vero quod ultimam corripit, nothus dicitur id est semiliber. Similiter et spondeus in quinto loco et dactylus in sexto. Item in spondaico metro *nothi* sunt dactylus et anapaestus, in iambico tribrachys anapaestus dactylus et pyrrichius. 'Nothus' enim dicitur adulter semiliber qui ex nobili patre et ignobili matre nascitur; econtra 'spurius' de ignobili patre et nobili matre. *Simplices* ut sunt disyllabi et trisyllabi; *duplices* ut sunt tetrasyllabi
- 370,36 K pentasyllabi et exasyllabi. *Non amplius* ideo quia *simplices* non habent plus quam *ternas* et *duplices* non possunt *amplius* habere *quam senas*, quia nec syllaba ab una incipiens littera potest habere plus quam sex, ut stirps.
- 371,2 K <T>*onus* ³⁵ est sonus id est vox. Igitur toni dicuntur a tonando id est a sonando quia ipsa syllaba quae accentu regitur plus sonat in dictione. *Accentus* vero est anima vocis et elevatio vel depositio sive acuendi gravandi et circumflectendi libra. Dictus autem *accentus* quasi 'ad cantus' eo quod sit iuxta cantum et est compositum nomen ex 'ad' praepositione et 'cantus' nomine. Graece dicitur 'prosodia'; 'pros' Graece ad Latine, 'ode' cantus. Inde et exodi-

³¹ 'Sescum'] cf. *Isid. Orig.* I, 17, 22 "Sescum enim dimidium dicitur"

³² Graece] et antiqui sescum dicebant medium ss. V²

³³ ab aequo] aliae quo V

³⁴ ab aequa] aliequa V

³⁵ <T>onus] t om. V.

arius dicitur praecentor qui utrumque praevidet chorum dextrum videlicet vel sinistrum. Distat ergo inter cantum et accentum: cantus sonus pronuntiationis est in syllaba, *accentus* vero elevatio seu depositio vocis ut arma. *Tenores* dicuntur a tenendo quia ibi tenetur sonus verbi in rectitudine naturali et ideo *tenores* dicuntur a tenendo quia omnis syllaba sine istis prolata tenoribus dissoluta videtur esse sicut populus sine principe. Tria nomina sunt sed
371,2 K ad unum sensum et ad unum finem tendunt: *acutus accentus* dicitur eo quod acuat et elevat vocem. Inde et ipse erectus et elevatus
371,3 K dicitur. Graece dicitur ΟΧΟC.³⁶ *Gravis* dicitur eo quod inclinat et deprimat vocem vel syllabam. Unde et ipse depressus vel depositus dicitur. Graece ΒΑΡΥΘΘΟΝΟC.³⁷ *Circumflexus* dicitur circumcurvus a circumflectendo id est tractim sonando quia in circuitu flectitur. Est enim ex acuto et gravi. Graece dicitur ΠΗΡΥCΠΟΜΗΝΗ.³⁸ *In Graecis* id est apud Graecos. *Teneat* id
371,4 K est occupet habeat. *Ultimum* id est novissimum scilicet locum; *paenultimum* quasi paene ultimum id est prope secundum videlicet ab ultimo; *antepaenultimum* id est tertium³⁹ ab ultimo. *Apud*
371,5 K *Latinos* id est in Latinis dictionibus. *Numquam* id est nullo in tempore tenet acutus⁴⁰ quia apud Graecos tenet ultimum. *Quotlibet* id est quotcumque *syllabarum sit*: scilicet licet plures habeat syllabas; sunt enim quaedam dictiones quae octo aut ampliores habent syllabas; et tamen in paenultimo servant accentum ut
371,6 K Hierosolymitanorum. *Non est commune cum ceteris* gravi accentu sed proprium ut iungatur *cum acuto vel circumflexo*; non enim
371,8 K potest acutus poni *cum circumflexo* vel circumflexus *cum acuto* in una parte, sed gravis cum utroque potest poni. *Ergo* scilicet dictiones. Respicit scilicet *ergo* ad superiora ubi dicit tonos esse tres.
371,7 K Et est sensus: *ergo* quia *toni sunt tres, acutus gravis circumflexus, monosyllabas quae correptam* id est brevem *vocalem habebunt*
371,9 K *acuto*⁴¹ *pronuntiabimus*, id est dicemus. *Pax*⁴² non est hic, id est

³⁶ ΟΧΟC] oxos ss. V² sc. ὀξύς.

³⁷ ΒΑΡΥΘΘΟΝΟC] bargit tonos ss. V²

sc. βαρὺς τόνος.

³⁸ ΠΗΡΥCΠΟΜΗΝΗ] perispomene ss.

V².

³⁹ tertiam (corr.) V.

⁴⁰ acutus] scilicet ultimum locum ss. V².

⁴¹ acuto] scilicet accentu ss. V².

⁴² Pax] cf. GLK 4,371, 9 et app. crit.; sc. πᾶξ.

in hoc loco, nomen sed adverbium comicum et significat 'statim' vel ut quidam volunt 'tantummodo'.⁴³ *Pax* quando 'pacem' significat nomen est et longam habet 'a' quia 'x' littera quae pro duobus consonantibus ponitur facit illud longum. Quando vero adverbium est, sicut in hoc loco, corripitur 'a' et significat 'statim'; verbi gratia "Pax veniet rex cum pace," id est statim. *Nix*⁴⁴ *pix nux*: licet haec nomina in omni positione producantur, tamen quia in reliquis casibus ubique breviantur, acuto pronuntiamus. *Nix* nulla creatura candidior apud mortales. *Pix* a picando dicta et est condimentum vel temperamentum vini. *Nux* a nocendo vel quia dentibus nocet vel quia stillicidium illius et umbra⁴⁵ vicinis arboribus noceat. Monosyllabae sunt quae ex una syllaba constant. *Res* 371,10 K est quicquid in nostris habetur usibus. *Dos* dotulitium vel donatio. 371,11 K *Spes* exspectatio futurorum bonorum quae in rebus non habitis 371,12 K habetur. *Meta* finis vel mensura. *Creta* insula est centum habens 371,14 K civitates. *Ambae* id est utraeque. *Leges*: dicta autem lex eo quod nos aliquando liget suis institutis. Et quid est lex? Constitutio populi qua maiores natu aliquid sanxerunt. *Reges*⁴⁶ a regendo. Rex enim est qui populum regit atque corrigit, vel rex potest appellari qui se ipsum bene regit et gubernat in Dei servitio. *Nepos* quando 'luxoriosum' significat, generis est communis⁴⁷ et tunc dicitur a nepa⁴⁸ serpente quae omnes filios devorat uno in saetis reservato. Quando vero 'filium filii' significat, generis est masculini et dicitur *nepos* quasi 'natus post'. Cuius femininum est neptis. 371, 15 K *Bonus* dicitur a Graeco quod est 'boo' id est voco. Unde et solus Deus dicitur bonus qui omnes sua bonitate ad se vocat. *Malus* dicitur a Graeco quod est 'melan' id est nigram; 'melan' enim 371,16 K Graece fel Latine. *Tullius Hostilius* propria nomina. *Positione* id 371,18 K est missione quia ibi duae consonantes ponuntur. *Catullus* id est parvus canis vel proprium nomen. *Metellus* proprium nomen.⁴⁹ 371,19 K *Mutabit accentum* scilicet de paenultimo in antepaenultimum si

⁴³ tantummodo] cf. *Prisc. GLK* 3, 79, 1.

⁴⁴ *Nix*] cf. *GLK* 4,371, 9 et *app. crit.*

⁴⁵ et umbra] *omissionis signo ss. V*; cf. *Isid. Orig.* 17, 7, 21.

⁴⁶ *Reges*] cf. *GLK* 4,371 *app. crit. ad l.12.*

⁴⁷ communi *V.*

⁴⁸ nepa] cf. *Fest. (Gloss. Lat.* 4,282 sub *Nepotes et 283 sub Nepa).*

⁴⁹ proprium nomen *om. sed ss. V.*

fuert longa ex muta et liquida. Latebrae a latendo dictae id est occultationes vel latibula. *Tenebrae* a tenendo dictae id est ob umbrationes. Haec duo nomina paenultimam habent natura longam quoniam a 'lateo' 'teneo' derivantur. Sed quia *muta et liquida* sequantur, mutatur accentus apud metricos. Atque in tantum

371,21 K praevaluit usus ut etiam apud Persicos servetur. *Cethegus* * * * *.⁵⁰

Perosus id est valde odiosus odibilis et invidus. Venit autem a verbo quod est 'odio, odis.' *Athenae* 'attis,' id est immortalis. *Athenae* civitas est, mater omnium studiorum. *Mycenae*: haec duo nomina propria nomina sunt civitatum apud Graecos, quae semper pluraliter efferuntur et singulariter intelliguntur. *Unus accentus est* scilicet aut acutus vel circumflexus. Nam gravis non est in certo loco constitutus nec tam praecipuus veluti illi duo.

371,23 K *Non minus* scilicet similiter *quam in una* simplici, scilicet dictione, sed sicut in simplicibus partibus vel dictionibus unus est accentus; sic et in compositis. *Malesanus* compositum est ex 'male' adverbio et 'sanus' nomine. Et antepaenultimam habet brevem, id est 'le,' paenultimam vero natura longam, id est 'sa.' Et ideo ipsa circumflectitur. *Ut malesanus* id est infirmus qui non bene est sanus,

371,23 K sicut infidus qui non bene est fidus. *Interealoci* id est in eodem loco. In antepaenultimo acuitur quoniam naturaliter brevis est paenultima. Ut enim testatur Donatus et ceteri auctores, illam servant in compositione productam partes quam in simplicitate

371,24 K habuerunt longam. Quod et hic fecit Donatus. *In integris* id est non corruptis nec vitiatis, vel in eis quae habent originem et flexionem Latinam, sive sit origo Graeca seu Latina. *In interiectionibus* quia incondita et impolita voce proferuntur. Sive enim dixeris 'papé' sive 'pápe,'⁵¹ non es reprehendendus. Non enim potest in eis, scilicet *interiectionibus*, regulae syllabarum esse observatio, seu quia omnium linguarum sunt voces vel quia secundum motum animi, non observatis regulis, proferuntur. *In peregrinis* scilicet dictionibus id est in Graecis quae nobis sunt peregrina. Et bene Graeca appellantur peregrina quoniam saepe hospitantur nobiscum

⁵⁰ post Cethegus lacunam indicavi, post quod verbum in cod. fere lineae dimidium vacuum est.

⁵¹ pápe sine accentu V.

- et in nostris usibus frequentius inveniuntur quam peregrina.⁵²
- 371,25 K Nam peregrinus dicitur hospes et advena. *In barbaris* scilicet sicut in supradictis haec nomina pro omnibus partibus ponit. Barbara nomina dicit Chaldaeae Syra et reliqua quae nobiscum habentur extranea. Barbarus enim dicitur immitis extraneus, sicut est 'acinaces' lingua Persica, id est 'hasta.' 'Mastruga' lingua Sardorum vestis est ex pellibus ferinis facta; idem est et 'renones' et 'crocene.'⁵³ *Legem* id est regulam et proprietatem. V
- 228,33 H (3) revertitur *formam*. Ceterum] *Hagen* (qui addit "formam vocabulum putredine deletum est"). revertitur naturam. Ceterum V
- 230,14 H (4) dividat ***** Mox] *Hagen* dividat. Ideo dixit 'mox' V
- 230,34 H (5) dicitur ***** De comparatione. Comparatio dicitur
372,19 K assimilatio] *Hagen* dicitur. *Positurae* dicuntur a ponendo quia ibi vox deponitur et recreatur, ne continuatione deficiat. *Distinctiones*¹ dicuntur a distinguendo, id est a² separando, eo quod per membra sententiam et litteraturam partim dividant et distinguant. ('Puncti' etiam dicuntur hae positurae qui ad hoc iuxta dictionem ponuntur ut positionem vocis ostendant vel ut in scriptura manifestior sit intelligentia. Quarum diversitas tribus punctis diverso in loco positis ostenditur.) Has etiam posituras Graeci 'thesis' appellant. 'Theto' enim Graece pono dicitur Latine. Retrogradiendo a fine vadit ad initium.
- 372,24 K Pulchre tenuit Donatus ordinem suae descriptionis. Primum enim de voce de littera de syllaba de pedibus de tonis de posituris de partibus ad ultimum de vitiis scripsit. *Incipit*³ *Ars Secunda*: ideo dicitur *secunda* quia praecessit prima. Primam enim artem composuit Donatus sub dialogo, id est sub interrogatione discipuli et responsione magistri ad pueros instruendos; istam vero secundam ad perfectos viros edidit et ideo nulla interponitur interrogatio. Iste titulus sicut supra dictum est in minoribus partibus varie in-

⁵² fort. extranea vel barbara pro peregrina legendum est.

⁵³ crocene fort. ex κροκίνη; cf. Ath. 12, 525c et Stratt. 69 (Kock, *Comicorum Atticorum Fragmenta*, Leipzig, 1880, I, 731).

¹ distinctione V.

² a] ad V.

³ Incipit] titulum INCIPIT ARS SECVNDA DONATI GRAMMATICI commentator suo in cod. legisse videtur.

venitur in multis codicibus. *Ars* dicitur ab artando id est a stringendo. Multum enim artat nos ad sensum verbi intelligendum. Et re vera quid artius quidve strictius quam ut tota latinitas octo comprehendatur partibus quinque videlicet neutris et tribus femininis? Vel *ars* dicitur a Graeco quod est 'apo tis arethis' id est a virtute. 'Ares' Graece Latine dicitur virtus. *Donati* nomen est auctoris. *Grammatici* nomen est officii; 'gramma' Graece littera Latine. Inde grammaticus litteratus.

372,25 K *Partes* dicuntur a partiendo id est a dividendo, vel a parilitate id est ab aequalitate eo quod pares et aequales in numero habeantur. Antiqui enim non dicebant ⁴ partes nisi de rebus corporalibus et paribus numeris; nos vero non solum de rebus corporalibus et de paribus numeris ⁵ sed etiam invisibilibus ⁶ rebus et de imparibus numeris. *Orationis* id est locutionis; 'orare' enim dicimus loqui. Inde orator dicitur eloquens facundus facetus lepidus. *Sunt* verbum substantivum est et anomale ⁷ hoc est inaequale, et proprie

372,25 K ad Deum pertinet qui dixit Moysi "Ego sum qui sum." ⁸ *Octo* definitio est numeri; ista definitio tria habet in se: veritatem rei pandit, inscios docet, superfluos quosque repellit. *Octo* nomen numerale est et indeclinabile; omnibus pluralibus [numeri] casibus et omnibus generibus adiungendum. *Nomen* dicitur a notamine sive a notione eo quod vocabulo suo id est nomine cognoscatur, vel etiam a Graeca etymologia dicitur. 'Onoma' Graece nomen Latine. *Pronomen* 'antonoma'; *verbum* 'rema'; *adverbium* 'birema'; ⁹ *participium* 'metoche'; *coniunctio* 'sindesmos'; *praepositio* 'prothesis'; ¹⁰ *interiectio* 'parathesis.' Quae suis in locis exponemus; hic non habet interrogationem quia ad perfectos viros loquitur.

372,26 K *Ex his octo partibus duae principales* et naturales: nomen et verbum. Per se enim plenam orationem facere possunt sine aliis. *Nomen* enim demonstrat quomodo vel quid vocetur sive quid est; *verbum* vero quid facit quidve patiat, ut 'homo loquitur,' 'equus

372,27 K currit,' 'Socrates disputat,' 'Aristoteles interrogat.' *Latini non ad-*

⁴ non dicebant bis V.

⁵ nos vero . . . numeris per homoeoteleuta om. sed ante Pulchre (ad init.) add. V.

⁶ invisilibus V.

⁷ anomale sic V.

⁸ Ego et sqq.] Exod. 3, 14.

⁹ birema] sc. ἐπὶ ῥημα.

¹⁰ prothesis] sc. πρόθεσις.

numerant articulum inter suas partes, id est partem articulorum, quia non habent eam. 'Articulus' deminutivum nomen est ab artu; artus maiora membra sunt corporis, articuli vero minora. Et bene ista pars 'articulus' nominatur quia sicut articuli membra sunt corporis ita ista pars membrum est orationis. *Graeci non adnumerant interiectionem* quia non habent eam, sed suas interiectiones ponunt inter adverbia. *Multi plures multi pauciores* ¹¹ putabant esse partes quam octo sicut Aristotelici qui dicebant solum modo duas esse partes, nomen et verbum, ceteras appendices quasi stipes in navi, id est stupae et clavi, id est quasi quoddam aminiculum. Alii vero dicebant quinque esse partes sicut Stoici discipuli Platonis qui ponebant participium cum nomine et verbo et dicebant nomen verbale vel verbum casuale. Interiectionem vero ponebant cum adverbio sicut et Graeci, et ita quinque faciebant partes. 'Stoa' Graece porta ¹² Latine. Inde Stoici dicebantur quia in porticibus nudi philosophabant. Quidam vero dicebant plures esse partes quam octo, novem videlicet vel duodecim. Illi qui duodecim dicebant esse dividebant nomen in tres partes: in propriis ¹³ nominibus videlicet et appellativis et in vocabulis, pronomen vero in duas partes: in pronomibus scilicet finitis et in infinitis, verbum in tres partes: in perfectis videlicet verbis et in infinitivis modis et gerundivis.¹⁴ Tali modo duodecim partes componebant. Sed Donatus regiam viam secutus et Graecos imitatus octo numeravit partes.

^{372,25} K *Partes* autem sicut supra dictum est a partiendo id est dividendo nomen acceperunt. Nam sicut una manus in quinque digitos dividitur, ita et grammatica cum una ars sit in octo partes dividitur: nomen pronomen verbum adverbium participium coniunctio praepositio ¹⁵ interiectio. Ex his octo partibus orationis quinque sunt neutri generis: nomen pronomen verbum adverbium participium, et tres feminini generis: coniunctio praepositio interiectio. Unde et quidam dicere solent omnem Latinitatem in quinque neutris et tribus femininis constare. *Nomen* dicitur a notamine sive a notione eo quod una quaeque res suo nomine cognoscatur, vel etiam a

¹¹ *De sententiis variis de orationis partium numero* cf. *Prisc. GLK* 2, 54, 5-55, 3.

¹² porta V.

¹³ proprii V.

¹⁴ gerundinis V.

¹⁵ praepositio V.

Graeca etymologia dicitur. 'Onoma' Graece nomen dicitur Latine. *Pronomen* dicitur eo quod pro nomine id est in loco nominis ponatur. *Verbum* dicitur a verberando id est a feriendo eo quod verberato aere plectroque linguae formetur. *Adverbium* dicitur eo quod sit iuxta verbum non solum in ordine partium sed etiam in nostra communi locutione, ut 'bene legit,' 'sapienter disputat.' *Participium* dicitur quasi 'participium' eo quod partem capiat nominis partemque verbi. *Coniunctio* dicitur a coniungendo eo quod coniungat alias partes. *Praepositio* dicitur a praeponendo eo quod aliis partibus praeponatur. *Interiectio* dicitur ab interiectiendo eo quod interiective id est subita voce profertur. 'Iacio, iacis' verbum est simplex; inde componitur 'interiacio,¹⁶ cis' cuius passivum 'interiacior' facit participium 'interiectus, interiecti' addita 'o' et verte 'ti' in sibilo; formatur 'interiectio.' *Ex his* subaudis octo partibus *duae sunt principales* id est quae principatum tenent. Non dicit quod solae essent partes sed principales eas vocavit id est nomen et verbum. Nam hae duae sine aliis plenam faciunt orationem ut 'equus currit,' 'homo loquitur.' *Latini* id est nos qui Latinam linguam habemus non adnumeramus *articulum* id est partem articulorum inter nostras partes; *Graeci* articulos habent quos per se computant pro una parte orationis, et ipsam partem ponunt in ultimo loco sicut nos *interiectionem*. Nos vero non habemus de illa parte nisi tres articulos 'hic' et 'haec' et 'hoc,' quos ponimus inter pronomina. Haec contra Graeci non habent *interiectionem* sed suas interiectiones ponunt cum adverbiiis. *Putant multi* doctores, id est autumant arbitrantur, *Plures* esse *partes* quam octo et *multi pauciores* sicut supra dictum est. *Verum* pro 'sed' ponitur. *Verum ex his omnibus* subaudis octo partibus *tres sunt quae sex casibus inflectuntur* id est *nomen pronomen et participium*: sciendum est quia omnia nomina et pronomina omnes casus non habent, sicut monoptota et diptota vel triptota. In participio vero nullus deficit casus. Quod vero dicit *sex casibus declinantur*; ¹⁷ synecdoche est, id est a toto parte intellege. Superius commemoravit

¹⁶ interiacio] interiacio V.

¹⁷ declinantur hic pro Donati inflectuntur.

octo partes et primum nomen posuit. Ergo quid sit nomen prius definit.

373,2 K *Nomen est pars orationis*: non dicit nomen est omnis oratio sed pars est orationis, id est una species Latinitatis. *Cum casu*: bene dicit *cum casu* et non 'cum casibus,' ne praeteriret monoptota nomina, id est unum casum habentia. Nullum enim nomen est quod non habeat vel unum casum. Sunt enim quaedam nomina quae habent sex casus et vocantur hexaptota ut 'unus, unius'; sunt alia quae habent quinque casus et vocantur pentaptota ut 'doctus, docti'; alia quae habent quattuor casus et vocantur tetra-

373,3 K ostendit *ut Roma Tiberis*. *Roma* dicta est a Romulo conditore suo. *Tiberis* fluvius est Romae et dictus est a Tibride rege qui proeliando cecidit in eo et mortuus est. Nam antea Albula vocabatur. '*Communiter*' ostendit corpus cum dicit *urbs flumen*. Istud nomen quod est *urbs* commune est super omnes urbes; *flumen* commune nomen est super omnia flumina. De 're' tacuit ut acueret sensum lectoris. Sed sciendum est quia 'res' similiter duobus

373,2 K modis ostenditur: '*proprie*' ut 'Michael,' 'dialectica,' 'grammatica'; '*communiter*' ut 'angelus,' 'ars.' Hoc nomen quod est 'angelus' de omnibus angelis dicitur sive de bonis seu de malis, et 'ars' de omnibus artibus dicitur. Tali modo omnia corporalia vel incorporalia ostendit duobus modis nomen. *Corpus* dicitur a corruptibilitate eo quod corruptum pereat et inde derivatur a verbo 'corrumpo, pis' ut quidam putant; sive, quod melius est, *corpus* dicitur quasi 'cordis pus' id est custodia cordis. 'Cor' enim in meditullio corporis est sicut pupilla in medio oculi. 'Pus' quando indeclinabile est putredinem significat; quando vero declinatur custodiam significat sicut de quodam propheta²⁰ legitur: positus est in pure, id est in custodia. Et sciendum est quia quicquid pertinet ad quinque sen-

¹⁸ alie V.

¹⁹ alie V.

²⁰ propheta] cf. Jer. 38, 6.

sus corporis, videlicet visum auditum gustum odoratum et tactum, *corpus* vocatur. 'Res' dicitur a recte habendo et est primum. Inde venit reclusa et rescilla per diminutionem. 'Res' ergo dicitur quicquid incorporale est, sed abusive etiam corporalia rem vocamus. Solemus enim dicere 'da mihi meam rem' id est meum librum vel vestimentum, et Vergilius ²¹ "Postquam res Asiae Priamique vertere ²² gentem." 'Res' posuit ²³ pro 'regno' quod est corporale.

373,3 K *Roma* a Romulo; *Tiberis* a Tibride. *Urbs* dicitur ab orbe id est a rotunditate. Urbes enim apud antiquos rotundae erant sicut et orbis. *Flumen* dicitur a fluendo id est a currendo quia semper defluit. *Nomini accidunt sex* id est sex accidentia ei eveniunt. 'Accidens' est quod adest et abest sine corruptione substantiae. Senarius numerus aequalis et perfectus est quia ex suis partibus constat, ut puta 'unus' sexta pars est, 'duo' tertia pars, 'tres' medietas. Unus igitur duo tres senarium numerum complent et

373,4 K ideo perfectus est. *Qualitas* dicitur in nomine eo quod quale sit illud nomen demonstrat, proprium videlicet an appellativum. 'Privum' dicebant antiqui 'proprium.' Inde et 'privatas res' dicimus quas ipsi soli possidemus sine societate aliorum. 'Appellativum' dicitur ab appellatione multorum eo quod sub uno nomine multa comprehendantur, verbi gratia: cum dicis 'homo,' omnes homines sub uno nomine comprehendis. *Comparatio* dicitur assimilatio vel coaequatio eo quod assimilando unum alteri praeferat. *Genus* dicitur a generando eo quod generet et generetur. *Numerus* dicitur a numerando sive a Numeria dea quam antiqui dicebant deam esse numeri, vel *numerus* dicitur quasi 'nummorum rivus.' Antiqui enim adhuc numerare nescientes sua tempora suosque dies ex lapillis computabant, in prosperitate quidem candidis, in adversitate nigris; hinc Persius ²⁴ "Hunc, Macrine, diem numera meliore lapillo" id est candidiore. *Figura* dicitur a fingendo id est componendo. 'Fingere' dicimus 'componere'; inde et compositores luti 'figulos' appellamus. Et est *figura* rerum forma in nomine vero. *Figura* est res artificialis quae aut ex una parte constat et simplex dicitur aut ex compluribus et composita vocatur ut 'iustus,' 'inius-

²¹ Vergilius] A 3, 1.

²² evertere *codd. Verg.*

²³ posuit *bis V.*

²⁴ Persius] 2, 1.

tus.' Composita autem *figura* est quae in duo intelligibilia dividi potest ut 'indoctus.' *Casus* dicitur a cadendo et venit a verbo 'cado, cadis' quod ²⁵ facit praeteritum 'cécidi.' ²⁶ 'Caedo' ²⁷ vero id est percutio 'cecídi' ²⁸ facit. Inde legendum est 'flagellis ceciderunt me.' Et quando 'cedo' significat 'recedo,' 'cessi' facit praeteritum. Est autem *casus* proprie 'ruina' unius cuiusque rei. Sed in isto loco *casus* est nominis inflexio et dicitur a cadendo eo quod
 373,4 K unus cadat in alium. *Unius hominis* subaudis ut Donatus. *Appellatio* id est vocatio multorum, subaudis hominum, ut grammaticus. *Vocabulum* id est nomen rerum incorporalium ut ars virtus iustitia dialectica. Hic tangit quae superius dixit, quia quidam dividebant nomen in tres partes, id est in propria appellativa et vocabula, quasi diceret Donatus. Ego non ignoro quia ²⁹ multi sic dividebant nomen *sed modo*, subaudis haec tria sub una parte retinentes
 373,7 K nomina, generaliter dicimus. *Bipertita est* id est quasi 'bis partita' in duas partes divisa. 'Partior, <tir>is' ³⁰ id est 'divido, dis'; verbum est simplex; componitur ex 'bis' adverbio et facit 'bipertior, tiris'; transit in participium 'bipertitus' quasi 'bis partitus,' 'bipertita' quasi 'bis partita.' *Aut propria sunt nomina* ut Donatus Vergilius et sunt propriae qualitatis, *aut appellativa* ut poeta grammaticus
 373,8 K quae sunt nomina appellativae qualitatis. *Propriorum nominum quattuor species sunt apud* ³¹ *Latinos*: bene dixit *apud Latinos* quia praenomina non sunt apud Graecos. *Praenomen nomen cognomen agnomen*: dicitur ergo praenomen eo quod nomini praeponatur id est anteponatur. *Nomen* dicitur quasi notamen eo quod unum quodque noscatur suo nomine. *Cognomen* dicitur quasi cognitionis nomen quando videlicet ex unius nomine multi vocantur, sicut ab uno 'Scipione' multi dicti sunt 'Scipiones.' *Agnomen* dicitur quasi agnitionis sive actionis nomen, id est ex actu venit sicut iste 'Scipio' *Africanus* dictus est quia Africam devicit. *Publius Cornelius Scipio Africanus* quattuor sunt nomina et unus homo intellegitur. 'Publii' dicebantur apud antiquos quasi 'pupi' vel

²⁵ qui V.

²⁶ et ²⁸ *accentus addidi.*

²⁷ Caedo] cedo ut plerumque V; hinc commentum de cedo infra.

²⁹ qui V.

³⁰ <tir> addidi.

³¹ apud pro secundum commentator suo in cod. legit; cf. GLK 4, 373, 8.

373,9 K 'pupilli,' illi videlicet parvuli qui post mortem parentum in tutela manebant aliorum. *Cornelius* a Cornelia matre dictus est. *Scipio* ³² Graece baculus Latine; inde et iste dictus est *Scipio* eo quod Afranium suum avum vulneribus receptis sustentabat in proeliis. *Africanus* agnomen est sicut diximus superius ab actu eo quod Africam devicerit. Sciendum autem quia hac de causa inventa sunt praenomina: Romani ³³ tempore Romuli cum adhuc pauperes essent et non haberent uxores, simulaverunt celebrare sollemnitatem Consi qui est deus consiliorum vel terminorum cuius festivitatem Terminalia vocabant antiqui eo quod in terminis agebantur. Cum igitur Sabini qui vicini erant ad hanc festivitatem invitati ³⁴ venissent, Romani trecentas feminas omnes virgines una excepta rapuerunt. Itaque Titus Tatius, rex Sabinorum, congregata omni multitudine processit ad bellum contra Romanos. Et cum iam in eo essent ut mutua caede dimicarent, triginta ³⁵ Sabinae quae iam enixae fuerant prosilierunt et se medium opposuerunt, sicque pacem inter generos et soceros id est inter maritos et parentes fecerunt. Et hanc pacem confirmandam decretum est ut nomina Romanorum essent praenomina Sabinorum, et nomina Sabinorum essent praenomina Romanorum. *Praenomina* autem *singulis litteris* id est una littera *notantur ut G* id est Gaius Caesar; ipse est Iulius. Antiqui ³⁶ 'Gaios' dicebant viros, 'Gaias' mulieres. Et quando viros significabant, scribebant C rectum; quando vero feminas, C inversum. Ideo Gaius per C scribitur sed per 'g' pronuntiatur. Sicut econtra 'gurgulio' per 'g' scribitur sed per 'c' pronuntiatur. Gurgulio ³⁷ est vermis fruges devorans quasi totum guttur. 'Caesar' dicitur a caesarie cum qua natus est, vel a caeso utero matris, sive etiam a caesa elephante quam suus pater interfecit die nativitatis illius. 373,10 K Nam elephas lingua Afrorum ^{37a} 'caesa' vocatur. *L* ³⁸ id est Lucius. *Catilina* consul fuit Romanorum. *Aut binis* id est duabus litteris 373,11 K notantur praenomina *ut Gn* id est Gnaeus Pompeius. 'Gnaeus'

³² sc. σκῆπτρον.

³³ Romani et sqq.] cf. Prisc. GLK 2, 57,

24. ³⁴ invitati] inmutati V.

³⁵ trigintae V.

³⁶ Antiqui] cf. Quint. Inst. 1, 7, 28.

³⁷ curgulio V.

^{37a} Afrorum] Etrusca Remig. in Phocam (Manitius, Neues Archiv 36, 1910, p. 48).

³⁸ L et Catilina] cf. GLK 4, 373 app. crit. ad l. 10.

- dictus est Pompeius a naevo, id est a macula, quam habuit in facie. Et sciendum est quia quando praenomen a duabus consonantibus incipit, ipsa sola scribitur. [*Ut L Lucius, M Marcus*].³⁹ *Aut ternis* id est tribus litteris, *ut Sex*. Sextus Roscius. Sextus in hoc loco non est nomen numeri sed proprium. Donatus autem dicit si consonans est prima littera in capite praenominis et tertia, vocalis vero in medio sit sicut Sextus; simul scribuntur. Sed Priscianus hoc frivolum esse dicit; tamdiu enim litteras scribendas esse asserit donec omnis dubitatio efferatur. Nam Sextus si per unum 's' scriberetur, dubitatio esset utrum Sestius⁴⁰ an Sergius sive Sextus diceretur. *Aut quaternis notantur praenomina ut Semp.*⁴¹ id est Sempronius Gracchus. *Appellativorum nominum species multae sunt*: secundum Donatum viginti septem, secundum vero Priscianum multo plures. *Alia enim sunt corporalia* quia corporalem rem demonstrant, ut 'homo' dicitur ab humo, 'terra' a terendo eo quod pedibus teratur, 'mare' ab amaritudine. Omnis congregatio aquarum 'mare' nuncupatur. *Alia incorporalia* quia rem incorporalem demonstrant. *Ut pietas* dicitur religio, id est cultus Dei ab eo quod est pius. Inde dicitur 'impius' id est irreligiosus qui Deum nescit. Omnis igitur homo peccator sed non omnis homo impius.
- 373,12 K *Dignitas* id est honor. *Primae positionis* id est primitiva quia ab illis alia derivantur. *Mons* ager. *Schola* Graece vacatio,⁴² quia ibi pueri vacant id est student. Nam 'vaco,'⁴³ vacas' est 'studeo, s'; 'vago, vagaris' est 'discurro' et semper in malo ponitur; inde 'vagatio' venit. In psalmo⁴⁴ autem ubi legimus "vacate," Graeci dicunt 'scolas sate.'⁴⁵ *Alia derivativa* id est deductiva quae ab aliis derivantur id est dicuntur. Nam derivare proprie est deducere. Inde et flumina derivare dicuntur quando per diversos rivulos deducta exsiccantur. *Montanus* homo dicitur qui in monte habitat; *scholasticus* qui semper in scholis versatur. *Deminutiva* id est quae ab aliis deminuuntur *ut monticulus* id est parvus mons, *scholasticulus* parvus scholasticus. *Deminutivorum* subaudis nominum tres
- 373,13 K
- 373,14 K
- 373,15 K

³⁹ Ut . . . Marcus] glossae olim marg. mihi videntur quae se inter commenta insinuaverunt.

⁴⁰ Sestius] se regius V.

⁴¹ Aut . . . Semp.] cf. GLK 4, 373 app. crit. ad loc.

⁴² vocatio V.

⁴³ voco V.

⁴⁴ psalmo] 46, 10.

⁴⁵ sc. σχολάζετε.

sunt gradus secundum Donatum id est descensiones vel ascensiones, ut mons monticulus monticellus. *Quorum* subaudis deminutivorum. *Forma* id est sensus. *Quo* ⁴⁶ *magis* id est quanto magis *deminuitur*, ⁴⁷ id est (dev)oratur subaudis in sensu. *Crescit saepe*: ideo dicit *saepe* quia aliquando de(minuti)va inveniuntur nomina eundem numerum syllabarum habentia (ut p)rimitiva habent ⁴⁸ a quibus deminuuntur ut 'vinum, villum,' 'bonum, bellum.' *Deminutiva* itaque quo amplius crescunt in syllabis, eo amplius decrescunt in sensu ut homo homuncio homunculus homulus homululus. *Quasi deminutiva* ideo dicitur *quasi* eo quod habeant litteraturam deminutivorum sed ab aliis nominibus non veniunt. Et quia nulla eorum *origo cernitur*, id est videtur, non sunt vere deminutiva. *Fabula* litteraturam inter deminutivam, sed quia non venit ab alio nomine primitivum est. Est autem *fabula* oratio ficta non facta, et dicitur a fando. *Macula* id est vitium corporis. *Vinculum* id est ligamen et dicitur a vinciendo id est ligando. Venit a verbo 'vincio, cis,' id est 'ligo, as,' et facit praeteritum 'vinxi.' 'Vincō' vero 'vincis' de victoria facit praeteritum 'vici.' *Sunt nomina tota Graecae declinationis*: ut *Themisto* proprium nomen est nymphae vel insulae. *Calypso* similiter nomen insulae. Nympha dicitur dea aquarum. *Pan* deus Arcadiae; ipse est deus pastorum et interpretatur 'omne.' ⁴⁹ Vel aliter *Calypso* nomen meretricis est et interpretatur 'venumdatrix ferri.' ⁵⁰ *Themisto* alterius mulieris nomen est et interpretatur 'venumdatrix vini.' ⁵¹ Tertio modo *Themisto* interpretatur sensibilis, *Calypso* rationabilis. Haec tria nomina *Themisto Calypso Pan* ideo inter appellativa posuit Donatus quia apud Graecos et propria sunt et appellativa. Sciendum est quia Donatus ideo has tres species id est *tota Graecae declinationis* et *tota conversa in Latinam regulam* et *notha*, cum sint propria nomina, inter appellativa posuerit: vel quia Graecos imitatus est qui qualitatem non in propria et appellativa nomina dividunt sed in primitiva et derivativa, vel quod repetere voluit quae supra omiserat. Non enim antea monstraverat in propriorum nominum

⁴⁶ *quo*] quam Keil.

⁴⁷ *deminuitur*] minuitur Keil.

⁴⁸ *habent*] habentur V.

⁴⁹ *omne*] cf. Serv. ad E. 2, 31.

⁵⁰ *venumdatrix ferri*] *interpr. ex chalybs*; cf. Gloss. Lat. I, 90, 91 sub c(h)alyps.

⁵¹ *venumdatrix vini*] *interpr. ex temetum*.

- speciebus quod essent quaedam nomina apud nos *tota* Graeca et
 373,¹⁸ K *tota conversa* et *notha*. *Sunt* nomina *conversa* id est mutat(a) *in*
 373,¹⁹ K *Latinam regulam* id est declinationem. *Polydeuces* 'Polydeuceos'
 dicunt (illi); nos vere dicimus 'Pollux, Pollucis.' Secundum fabulam
 Pollux et Cas(tor) fratres fuerunt, filii Iovis et Ladae. Sed Pollux
 proprie fuit filius Iovi(s et Ladae) et fuit immortalis de parte
 patris. Castor vero filius fuit eiusdem Ladae de Tyndaro. Sed
 Pollux qui erat immortalis voluit dividere suam immortalitatem
 cum Castore suo fratre. Qui cum pergerent ad Troiam ad vindi-
 candam sororem suam Helenam raptam a Paride, naufragio peri-
 erunt. Sed miseratione deorum versi sunt in deos et ideo vocantur
 373,²⁹ K semidei et semihomines. *Odysseus* 'Odysseos' dicunt illi Graeci,
 nos vero 'Ulixes, Ulixis' dicimus. Alia *sunt inter Graecam Lati-*
namque formam id est declinationem quia non ex toto servant regu-
 lam, neque ex tota convertuntur in Latinam et ideo *notha appellantur*,
 id est adulterina semilibera corrupta; ex parte Graecae dictionis
 libera sunt, sed ex altera parte qua mutantur in Latinam linguam
 quasi corrupta sunt. 'Nothus' autem dicitur qui ex nobili patre et
 ignobili matre nascitur. Sicut econtra 'spurius' vocatur qui ex nobili
 matre et ignobili patre nascitur. *Achilles* 'Achilleos,' *Agamem-*
non, 'Agamemnonos' dicunt illi, et nos dicimus *Achilles* 'Achillis,'
 373,²¹ K *Agamemnon* 'Agamemnonis.' *Achilles* interpretatur 'sine labiis';
 'a' sine, 'chillon'⁵² labium; inde *Achilles*. *Sunt* autem *alia homo-*
nyma id est uninomia vel univoca quando unum nomen est et sub
 373,²² K una voce multa⁵³ significat, *ut nepos aries acies*. *Nepos*⁵⁴ dicitur
 filius filii quasi 'natus post' et tunc est masculini generis; cuius
 femininum dicitur 'haec neptis.' *Nepos* etiam luxuriosum significat
 sive prodigum id est dilapidatorem substantiae et tunc communis
 est generis. Et derivatur a nepa serpente quae dicitur habere
 ducentos filios, et omnes devorat uno in squamis eius reservato.
Acies similiter multa significat. Nam *acies* dicitur acumen ferri
 et acumen oculorum sive mentis et *acies* dicitur exercitus in mo(do)
 cunei ad bellum directus. *Aries* quoque tribus modis dicitur: *aries*
 est signum (in caelo) et *aries* est animal multo (. . .) videlicet;

⁵² chillon] sc. χεῖλος.⁵³ multas V.⁵⁴ *Nepos* . . . reservato] cf. *supra* p. 140.

aries dicitur etiam machina<mentum belli> cum quo muri vel portae destruuntur. Dicitur ergo *aries* eo quod apud antiquos 'aris' offerebatur, vel *aries* dicitur quasi fronte ruens. *Sunt autem alia synonyma*: 'sin' Graece con Latine. Inde *synonyma vel polyonoma* id est ex multis nominibus unam rem demonstrantia, ut *terra humus limus tellus arvum*.⁵⁵ *Terra* dicitur a terendo eo quod pedibus teratur. *Humus* dicitur ab umore. *Arvum* est terra incisa.⁵⁶ *Ensis mucro*; *gladius* idem est. *Ensis* est absque vagina. *Mucro* proprie dicitur summitas gladii sed pro toto ponitur. *Mucro* a mordendo dicitur. *Gladius* dicitur eo quod gulam dividat, et dicitur *gladius* quasi 'cladius,' a clade quam facit. *Sunt autem alia patronymica*: *patronymica* dicunt quasi 'patrilega' vel 'patrum legalia.' 'Nomos' Graece *lex* dicitur. *Patrilega* autem ideo dicunt quia ex patribus fiunt et ex patris scriptura aliquid retinent. Resolvuntur etiam per genetivum primitivi et significant filium vel nepotem.

373,23 K *Ut Atrides* id est Agamemnon, Atrei filius; *Pelides* id est Pelei filius vel nepos. *Ab avis* subaudis *fiunt*, ut *Atlantiades* dictus est Mercurius, filius filiae Atlantis. *A matribus* ut idem dictus est Maiades a Maia matre. Et licet Donatus praetermiserit brevitati studens, etiam a fratribus conditoribus atque regibus patronymica inveniuntur: a fratribus, ut *Phaethontiades* dicunt sorores *Phaethontis*, filii solis; a conditoribus, ut *Romulidae* vocantur Romani a Romulo qui Romam condidit; a regibus, ut *Aeneadae* milites dicuntur⁵⁷

373,24 K ab Aenea rege. *In his* subaudis patronymicis; *Graecam* declinationem vel *regulam* subaudis quam Latinam. Si sciremus Graecam declinationem, Graeca verba melius Graece declinaremus quam Latine. *Alia eorum*⁵⁸ scilicet patronymicorum, *aut in 'des' exeunt*

373,26 K id est finiuntur, *ut Atrides ab Atreo* patre; *aut in 'ius,' ut Peleius*,

373,27 K idem est et *Pelides, a Peleo* patre; ⁵⁹ *aut in 'on,'* ⁶⁰ *ut Nerion a Nereo* patre qui est deus marinorum. *Feminina* scilicet patronymica *ut Atreis* id est fili(a) vel neptis Atrei. *Peleias* similiter filia vel neptis Pelei. *Nerine* id est fil(ia vel) neptis Nerei. *Sunt alia*

⁵⁵ *limus . . . arvum*] quae verba, a commentatore suo in cod. Donat. inventa, expl. marg. verborum 'terra, humus' esse videntur; cf. Keil app. crit. ad loc.

⁵⁶ insics2. V.

⁵⁷ dicunt V.

⁵⁸ eorum] horum Keil.

⁵⁹ patreo V.

⁶⁰ on] ion Keil.

- nomina. *Thetica*:⁶¹ 'theto' Graece pono (nos; 'thesis' posi)tio; 'sintesis' compositio. Inde etiam *thetica* dicunt, *id est possessiva*, quia possessionem ostendunt et resolvuntur per genitivum primitivi. *Ut Evandrius ensis* duo nominativi sunt sed unus per genitivum primitivi resolvitur, id est Evandri⁶² *ensis*. *Agamemnoniae Mycenae* duo nominativi plurales; scilicet *Mycenae* civitas est Graeciae quae singulariter intellegitur sed pluraliter declinatur, ut 'hae Mycenae.' *Agamemnoniae* autem vocatur quia Agamemnon qui fuit rex Graecorum illas aedificavit. *Alia mediae significationis*: ideo *mediae significationis* dicuntur, quia et in bonam et in malam partem accipi possunt, id est in laudem et vituperationem. Nam sicut laudando 'magnus rex' et 'fortis imperator' dicimus, ita et vituperando 'magnus' sive 'fortis latro' dicimus. *Mediae significationis*: 'ton meson' Graece dicitur; 'mesos' enim medius vocatur.
- 374,3 K *Haec*⁶³ *etiam epitheta dicuntur* id est superposita. 'Epi' super; 'teto' pono. Inde *epitheta dicuntur* id est superposita quia fixis nominibus superponuntur. *Sunt alia qualitatis* id est quae qualitatem significant. 'Qualitas' autem et in corpore et in animo potest esse: in corpore ut albus niger, in animo *ut bonus malus* quia illa bonitas ad animam pertinet. *Bonus* dicitur a Graeco quod est 'boo' id est voco, et proprie ad Deum pertinet qui ex sua bonitate omnes ad se naturaliter vocat. *Malus* dicitur a Graeco quod est 'mellan,' id est nigrum fel;⁶⁴ inde 'melancholia'⁶⁵ dicitur, nigra cholera, unde etiam evenire solet ut quibus abundat nigra cholera 'malitiosi' fiant. *Alia quantitatis* id est quae quantitatem demonstrant. Quantitas ad corpus tantum refertur quia mensura non potest esse nisi in rebus corporalibus; quod si ad animum referatur, translativè fit ut 'magnus animus.' *Graecus* dicitur homo de Graecia; Graecia autem hoc nomen accepit a Graeco rege qui in ea imperavit. *Hispanus* homo de Hispania quae et ipsa ab Hespero rege nomen accepit. Patriam indicant, id est civitatem. Nam patria proprie civitas * * * *⁶⁶ ubi patres commorantur. Et dicta patria

⁶¹ *Thetica*] *ctetica sine dubio scripsit Donatus.*

⁶² Evandrii V.

⁶³ hoc V.

⁶⁴ fellis V.

⁶⁵ melancoria V.

⁶⁶ fort. civitas illa.

quasi 'pacis atria.' (Thebanu)s dicitur homo de Thebis civitate Graeciae quae centum portas fertur habere. * * * * * ⁶⁷ alia civitas in Aegypto quae Thebae vocatur centum similiter portas habens, cuius habitatores Thebaei dicuntur. Unde Iuvenalis ⁶⁸ "atque vetus Thebae centum iacet opruta portis." De hac civitate Amphion auloedus quem, cum Alexander audisset suaviter tibiis canentem, ⁶⁹ interrogavit eum de qua civitate erat. At ille "Utinam" inquit "haberem civitatem; olim Thebis fui, modo autem non." Antea enim eam destruxerat Alexander et iuraverat quia in aeternum non reaedificaretur. ⁷⁰ Postea misericordia motus propter illius auloedi cantilenam iussit iterum eam restaurari. *Romanus* dicitur homo de Roma civitate, quae etiam ut fertur a valendo 'Valentia' primo vocata est. Hoc autem distat inter nomina gentis et patriae, quia nomina gentis totum regnum demonstrant ut Graecus totam gentem demonstrat; nomina vero patriae partem demonstrant, ut *Thebanus* quod solum modo propriam civitatem id est Thebas demonstrat. *Alia numeri* id est quae numerum indicant ut *unus* vero. *Unus* per se non est numerus, sed quia omnes numeri ab unitate initium capiunt, ideo et ipse abusive numerus vocatur. *Duo* pluralis numeri est et masculini generis et neutri invenitur; facit autem femininum 'hae duae.' *Alia ordinis* id est quae ordinem ostendunt ut primus secundus. Ista nomina ordinem significant, verbi gratia 'iste sedeat primus, ille secundus.' 'Prior' autem et *primus* veniunt ab adverbio 'pridem,' sed *primus de multis* subaudis dicitur quia superlativus est, *de duobus prior* quia comparativus est; *sicut de duobus alterum dicimus*, ita *de multis alium*. Ideo *de duobus alterum dicimus*: in multis vero *alium* quia antiqui numerandi adhuc peritiam non habentes ita numerabant 'unus, alter'; postea vero 'alius, alius' multis vicibus dicebant. *Sunt alia ad aliquid dicta* ideo haec nomina *ad aliquid* esse dicuntur quia cum pronuntiantur aliud praeter se ostendunt et sine alterius societate proferri non possunt. *Ut pater frater*: cum dicis p(atrem); demonstras et filium. Non enim dicitur *pater* nisi habeat filium, s(icut non dicitur) filius nisi habeat patrem. *Pater* autem dicitur vel a patran(do, id est, rem)

374,6 K

374,6 K

374,7 K

374,8 K

374,9 K

⁶⁷ fort. habere. Sciendum quia est.

⁶⁸ Iuvenalis] 15, 6.

⁶⁹ ucanentem V.

⁷⁰ reedificeretur V.

veneriam ⁷¹ perficiendo, quia 'patrare' est proprie rem veneriam ⁷² perficere, sicut Persius ⁷³ "patranti fractus oculo," vel sicut Iohannes ⁷⁴ dicit a Graeco quod est 'pantachiam' id est omnia servans. *Frater* dicitur quasi 'fere alter.' *Alia ad aliquid aliter* ⁷⁵ *se habentia* ut cum dextram demonstras et sinistram. *Aliter* ⁷⁶ *se habentia* id est mutatione loci, verbi gratia 'ille qui modo dexter sedet mutando locum potest esse et sinister, et qui sinister potest esse et dexter.'

- 374,10 K *Haec* vero id est dexter et sinister. *Et comparativum gradum admittunt* id est assumunt accipiunt. Quaerendum est autem quid est quod dicit 'comparationem recipiunt' cum dexter non potest esse minus dexter nec plus dexter et sinister. Sed sciendum quia dexter aliquando prosperum significat, verbi gratia 'Dexterior est ista dies,' id est prosperior hesternae die, et 'Sinisterior est iste casus' id est peior altero casu. Habent etiam superlativum 'dextimus' et
- 374,11 K 'sinistimus.' *Sunt alia generalia* id est multa in se generaliter comprehendentia *ut corpus animal*. *Corpus* generale est supra omnia corpora vel supra omne quicquid ad quinque corporis sensus pertinet. *Animal* quoque generale est supra omnia animam habentia, unde et ab anima *animal* vocatur. *Lapis* et *lignum* species sunt sub
- 374,12 K genere quod est corpus; *homo* vero sub animali. *Lignum* est arbor incisa. Dictum est *lignum* eo quod combustum vertitur in ignem. *Doctor* et *lector* verbalia sunt et formantur ab extremo supino 'doctus' et 'lectus.' *Alia participiis similia* ⁷⁷ id est quia litteraturam participiorum habent. Desinunt enim in 'ns' sicut participia praesentis temporis *ut demens*. *Demens* dicitur quasi 'demptus mente' id est diminutus parte mentis. Videtur autem participium esse a verbo 'demo, demis,' sicut (sapientia) a 'sapio' et potens ab eo quod est 'possum,' sed quia tempore carent, (comparativum) admittunt; nomina sunt, non participia. (*Alia verbis*) ⁷⁸ *similia* id est quia eandem litteraturam habent. *Ut comedo* et nomen est tertiae declinationis et verbum tertiae coniugationis. Sed quando nomen est, paenultimam producit; quando autem verbum, corripitur. *Comedo*

⁷¹ veneriam V.

⁷² veneriem V.

⁷³ Persius] 1, 18.

⁷⁴ Iohannes] sc. Scottus.

⁷⁵ et ⁷⁶ aliter] qualiter Keil.

⁷⁷ similiter V.

⁷⁸ Alia verbis] Keil.

id est gluto, quod Graece 'ardaliae' ⁷⁹ dicitur. Similiter *palpo* id est 'caecus' et nomen tertiae declinationis et verbum primae coniugationis invenitur. *Contemplator* vero id est 'inspector' et 'speculator,' id est 'praevisor.' Cum sint nomina tertiae declinationis, et similiter sunt futuri imperativi. *Sed illa* id est participiis similia. *Comparisonem* id est quia *comparisonem* recipiunt quando nomina sunt. *Dinoscuntur* ⁸⁰ id est segregantur. *Haec* id est verbis similia.

231,19 H *Casibus* id est quia quando nomina sunt per casus inflectuntur.

374,15 K DE COMPARATIONE. Comparatio dicitur assimilatio V

240,6 H (6) corni] *Hagen* corni, cornui, nuo; inde et cornuorum reman-
376,20 K sit V

244,25 H (7) paribus ***** inde et 'grues'] *Hagen* paribus, id est aptus
377,33 K et conveniens sociis; inde et 'congrues' (*lege congruens*) V

245,8 H (8) in rum ***** convenit] *Hagen* in rum. 'Necesse est' id est
378,6 K convenit V

245,9 H (9) hanc regulam ***** Ab hoc] *Hagen* (*qui annotat*: "Post
378,8 K regulam *aliquot lineae putredine extinctae sunt*.")) hanc regulam.
'in quibus' subaudis nominibus 'discernenda sunt' utrum masculini generis an feminini, ut deus dea, cuius dativus et ablativus in 'bus' non in 'his' (*lege 'is'*) proferimus ut 'his et aliis deabus.' Quia si dixerimus 'dis,' masculinum genus videamur comprehendere non femininum. 'Quaecumque nomina e littera': nunc de tertia loquitur. Tertia declinatio ablativo singulari e correpta terminatur ut 'ab hoc pariete.' Contra hanc regulam terminat ipsa ablativum in 'e' brevem, genetivum pluralem in 'rum,' dativum et ablativum in 'his' (*lege 'is'*). Invenimus ut: "Ab hoc V

245,11 H (10) vasis *****] *Hagen* vasis; ideo hoc quia V

378,14 K
248,11 H (11) Post reliqua *lacunam indicavit Hagen sed nihil hoc loco addit* V.

250,2 H (12) aestimaverunt *****] *Hagen* existimaverunt V

381,9 K
265,24 H (13) timentis, ut ***** video] *Hagen* timentis, ut 'hei'; inde
391,27 K Arator (*Act. Apost. 2, 701, ed. Perugi, Roma, 1911*) "Hei mihi iam video V

266,17 H (14) Affectus dicitur desiderium, i. voluntas * * * effectus

⁷⁹ cf. ἄρδω.

⁸⁰ dinoscuntur] discernuntur Keil.

391,27 K * * * * * ipse actus ab efficio verbo i. perfico] *Hagen* 'Effectus' dicitur ab 'efficio' verbo id est perficio; 'affectus' dicitur desiderium id est voluntas mentis. 'Effectus' vero dicitur actio (vel factio ss.) id est ipse actus *recte post* disyllabum, (265, 25 H) *V*.

The above comment (No. 14) plainly belongs at the beginning of the exposition on the Interjection, and not at the close, where *Hagen's* MS. locates it. I assume that the scribe of the *codex* from which the copyist of *Hagen's* MS. was working omitted this note and then, with the proper signs to show where it belonged, added it at the end of the treatise where there still was sufficient room. The copyist of *Hagen's* MS., on this theory, simply disregarded the *omissionis signa*.

B. Material apparently omitted in Hagen's MS. through homoeoteleuta or homoeoarcta.

222,25 H (1) consonantes. Sequitur] *Hagen* consonantes, quoniam aliae
367,10 K sunt vocales et aliae consonantes. Sequitur *V*

226,24 H (2) pulchrum. Geminant] *Hagen* pulchrum. Venus etiam dicitur
368,27 K dea libidinis. Unde Cupido, filius ipsius Veneris, pingitur nudus alatus et pharetratus; nudus quia a nudis peragitur, alatus quia cito pertransit, pharetratus quia vulnerat animas perpetrantium. Geminant *V*

245,23 H (3) quaedam sunt, quia non faciunt 'domis' 'iugeris.'] *Hagen*
378,30 K quaedam sunt ut 'ab hac domo,' 'ab hoc iugero,' 'his et ab his domibus, iugeribus.' Ideo econtra sunt quia non faciunt 'domis' 'iugeris' *V*

248,17 H (4) primitivum eius; extrinsecus] *Hagen* primitivum eius quod
380,16 K est 'ego,' quia sicut vir dicit 'meus servus' ita et mulier. Ergo intrinsecus trium generum est; extrinsecus mobile in 'us' in 'a' in 'um.' 'Tuus' similiter intrinsecus trium generum est sicut 'tu,' primitivum eius. Extrinsecus *V*

263,24 H (5) duo pronomina] *Hagen* duo appellativa ut 'iustus' et 'sanctus,'
388,28 K duo pronomina *V*

264,14 H (6) litteraturam copulat. Expletivae] *Hagen* litteraturam copulat,
388,30 K verbit gratia 'aut legam aut scribam' et Vergilius (*cf.* 10, 449) "aut

spoliis laetabor opimis aut insigni morte moriar." Sensus disiungit quia utrumque facere non poterat sed litteram copulat. Expletivae V

^{264,32} H (7) ^{*} mari. Infula] *Hagen* mari. 'Plerumque producantur': quare
^{389,30} K dixit 'plerumque' quia in his quattuor nominibus non solum positione sed etiam naturaliter producantur hae duae praepositiones, videlicet 'in' et 'con,' et his nominibus supra dictis nequeunt separari. Infula V

^{265,34} H (8) verbum, istae] *Hagen* verbum ut 'iuste' iudicat. Iuste adver-
^{391,26} K bium est; iudicat verbum. Iste V

C. *Additional material offered by Vat. Reg. 1560:*

The Vatican text furnishes five or six brief notes apparently not included in the Einsiedeln version. Most of these consist merely of a rather pompous parade of quotations to illustrate a grammatical point already sufficiently illustrated. They probably represent personal marginal notes which have undeservedly crept into the text. One only, a note at the end of the chapter *De Nomine*, appears to me to bear the touch of authenticity. It is to be noted, too, that its position at the end of the chapter may have made its omission not unlikely. This note reads as follows:

^{246,9} H vel ex diminutione.] *Hagen* vel ex diminutione. Vel aliter intelligitur
^{379,15} K 'in his regulis vel ex conlatione positivorum nominum vel ex diminutione cognoscitur': 'in his regulis' scilicet quinque declinationum supra dictarum exceptis Graecis. 'Analogia' id est proportio vel similitudo. 'Ex conlatione' id est ex comparatione vel assimilatione. 'Positivorum' id est primitivorum, verbi gratia 'doctus.' Si nescieris declinationis vel generis cuius sit, iunge ei 'castus,' 'iustus,' 'bonus' et 'fons,' 'mons,' ceteraque alia, ut pro primitiva videamus declinationem primitivorum. 'Vel ex diminutione': nominum potes videre genus, verbi gratia 'mons'; si nescieris cuius sit quod est primitivum, per eius diminutivum videbis quod est 'monticulus.' Sic et 'funis,' 'funiculus.' Tamen non ex omnibus potest hoc cognosci diminutivis, quia alterius generis inveniuntur quaedam diminutiva et alterius eorum primitiva. V

D. *Evidence of Vat. Reg. 1560 on Hagen's textual conjectures and emendations:*

- (1) 221, 2 H et] *V Hagen om. E*
- (2) 224, 13 H g et s] *V Hagen g s E*
- (3) 224, 33 H esse] *V Hagen om. E*
- (4) 225, 2 H admisimus id est] *V Hagen om. E*
- (5) 229, 6 H ambiguitatis] *Hagen om. E V*
- (6) 230, 35 H esse videatur] *V Hagen esse **** atur E*
- (7) 231, 32 H et] *Hagen om. E V*
- (8) 240, 2 H a] *V Hagen om. E*
- (9) 243, 18 H activus] *V Hagen accusativus E*
- (10) 248, 2 H omnia] *Hagen om. E V*
- (11) 248, 21 H noster liber] *Hagen om. E V*
- (12) 248, 22 H vester liber] *Hagen om. E V*
- (13) 248, 22 H estis] *Hagen om. E V*
- (14) 250, 6 H dicitur] *V Hagen om. E*
- (15) 250, 14 H quis] *Hagen quies E episcopus V Bern. 386*
(laudatum ab Hagen. in app. crit. ad loc.)
- (16) 261, 3 H pie] *V Hagen om. E*
- (17) 263, 5 H si quartae declinationis est] *Hagen quartae declinationis E V*

SELECTED STUDIES IN INDO-EUROPEAN PHONOLOGY

By GORDON MYRON MESSING

Introduction

In 1917, after the virtual deciphering by F. Hrozný¹ of the Hittite cuneiform material from Boghazköi, Indo-European scholars were confronted by a wealth of linguistic facts which had somehow to be reconciled with the general picture of Indo-European. Here were texts whose general Indo-European character (morphology and significant items of vocabulary) shone clear through the confusing medium of the cuneiform writing and which could be dated several centuries earlier than the date usually assigned to the oldest Vedic hymns. Yet the language differed so markedly from Indo-European, as we know the latter from correspondences in the separate Indo-European languages, as to raise the question: does Hittite really show us an earlier stage of Indo-European by preserving archaisms elsewhere lost, or is it on an equal footing with the other Indo-European tongues, though showing extensive innovation? The first alternative, the so-called Indo-Hittite hypothesis, as suggested by Kretschmer and Forrer² and still maintained by E. H. Sturtevant, sets Hittite in sharp contrast to other Indo-European languages and recognizes as Hittite archaisms such items as the lack of feminine gender, loss of *ā*-stems, a curious inflexion of the plural in nouns, lack of **to-* in the pronominal stems, and, in particular, the presence of an *h*-sound³ of independent origin. But to most students of Hittite, the second alternative is more attractive; granting that Hittite may show archaisms, we must none the less postulate a rapid and far-reaching series of transformations and recognize indubitable traces of much influence exerted by some or other of the neighboring non-Indo-European tongues.⁴

¹ *Die Sprache der Hethiter*, 1917.

² *MDOG*, LXI, 25.

³ For simplicity I shall use *h* for *ḫ* throughout. As there is only one *h*-sound in Hittite, either transcription is possible; similarly, *s* for *š*.

⁴ Precise sources can only rarely be known. Cf. Hitt. *tarkumma(i)* 'to interpret' from Accadian *targuman* 'interpreter,' our English *dragoman*.

We have cited the *h*-sound of Hittite as of independent origin. This statement must be justified, since it is of capital importance for the discussion which is to follow. It can easily be shown that those Indo-European languages which possess an *h*-sound have evolved it from some other sound or sounds,⁵ as Latin *h* from $\hat{g}h$ or Germanic *h* from \hat{k} , or else have developed it as an intervocalic glide as in Umbrian *stahu* < **stāiō*, Lat. *sto*. The latter phenomenon is usually, though not invariably, confined to those languages which do not use \hat{i} and \hat{u} as glides.⁶ As usually found in the separate languages, this *h*-sound may be described as the noise of friction produced by a current of air insufficient to vibrate the vocal chords;⁷ a voiced variety is found in Sanskrit.

In Hittite cuneiform there are some twelve syllabic signs to designate in various combinations the *h*-sound, which is common and stable. A few important details should be noted: *h* is found in the related Luwian and in hieroglyphic Hittite; the initial combinations *hi*- and *he*- are extremely rare; the spelling *-hh-* is common in intervocalic position, contrary to the rule in Accadian. In two or three cases there exist variant spellings with and without *h*, notably in the genitive case of *eshar* 'blood,' *eshanas* or *esnas*, and in *hannas* 'grandmother' beside *annas* 'mother,'⁸ but these run counter to the general stability of the sound in Hittite; some interpret *esnas* as indicating the loss of *h* between consonants. The interchange of *h* and *k* which Weidner assumed seems confined to foreign words. Götze and Pedersen⁹ find an interchange of *h* and *r* in *wahnumanzi/warnumanzi* 'burn,' though Couvreur adduces several other spellings of this word in the endeavor to show that it is borrowed.¹⁰ If authentic, this sole example casts some light on the Hittite pronunciation of the *h*-sound, for it would point to a confusion between the velar *r* without vibra-

⁵ Full discussion in Couvreur, *Hett. H*, pp. 29-47. Note that in Tocharian *h* is rare except in interjections and Sanskrit loan-words.

⁶ Umbrian uses all three, the *h*-glide being perhaps an Italic innovation.

⁷ Léonce Roudet, *Eléments de phonét. gén.*, p. 133.

⁸ E. H. Sturtevant, *Lang.* 15.153 (1939), believes that *annas* has lost an initial *h* to follow the analogy of *attas* 'father' (cf. Lat. *anus*, Gr. *ἀνῆρ*).

⁹ *Murš. Sprach.*, pp. 28-32.

¹⁰ Couvreur, *Hett. H*, pp. 54-5.

tion (ʔ) and the voiced velar fricative (ɣ). Just so, educated speakers of modern Greek will identify their value of γ before a back vowel with the Parisian French (velar) *r*. But it may be that Couvreur's objection is sound, since there is some evidence against a single voiced Hittite *h*, as will appear shortly.

Almost from the beginning, attempts were made to connect the Hittite *h* with some sound or sounds of Indo-European on the basis of etymologies.¹¹ Here let us make another general warning. The Hittite vocabulary is a jungle. Few Hittite etymologies are entirely satisfactory, and I shall cite only these few. Earlier derivations of *h* from IE *s*, *ḱ*, *ǵ*, *ǵh* and so on were refuted by convincing agreements, e.g. *siptamiya*-, Lat. *septem*; *ki*- 'lie,' Gr. *κείται*; *genu*, Lat. *genu*, Gr. *γόνυ*; *gimmant* 'winter,' Lat. *hiems*, Gr. *χειμών*, to mention only a few out of many. Meanwhile, Cuny and Kuryłowicz, and independently Couvreur, had reached the conclusion that *h* had no consonantal representatives in the other Indo-European languages and was rather to be identified with the phonemes postulated in the system of de Saussure¹² which united with the normal *e*-vowel to form *ē*, *ā* or *ō* on the analogy of the short diphthongs. Cuny and H. Möller were not slow to connect these phonemes with the laryngeals found in the Semitic languages, to raise anew the question of a common origin for Semitic and Indo-European. At all events, the Hittite *h* was found in many cases to correspond to an *a*- or *o*-colored vowel in the other Indo-European languages: Hitt. *hanti*, Gr. *ἀντί*; Hitt. *hastai*, Gr. *ἄστέον*. Now it is a fact well known from the Semitic languages that the laryngeal consonants have the power to modify the quality of a contiguous vowel, but the question immediately arises, what variety of laryngeal and how many of them must we consider.

A peculiarity of the Hittite script must be noted. Hittite, like Accadian, Elamite, and Mitanni has apparently given up the distinction between voiced and voiceless stops; the same phenomenon is observed in Tocharian, except that in this language the voiceless

¹¹ Couvreur, *ibid.*, pp. 58-70 conveniently summarizes them.

¹² *Mémoire sur le système primitif des voyelles dans les langues indo-européennes*, 1878; called *Q* and *A* by de Saussure.

stops alone are written, while in Hittite voiceless and voiced stops are written almost interchangeably, though Walter Petersen guessed that the voiced/voiceless relation was replaced by a distinction of lenes and fortes.¹³ Sturtevant has suggested that the original voiceless stops were written double in the interior of words while original voiced stops were written single.¹⁴ Stefán Einarsson suggested on the basis of Icelandic and Finnish evidence that the voiceless stops are in general longer, a fact which might justify the Hittite writing, if it is true.¹⁵

Since the *h* is also written both single and double, some have assumed that originally a voiced and voiceless laryngeal were so distinguished. While all these problems will come up later, it may be remarked here that most of the recent works on Indo-European ablaut theory are highly schematic with regard to phonetic interpretation. On the face of it, the three or four laryngeals assumed by Cuny, Kuryłowicz, and Sturtevant require much justification if we remember that two of them have admittedly disappeared from Hittite, and all four have passed out of "Indo-European." In particular the so-called "glottal stop of velar color," assumed to fit the few cases in which Hittite does not match Indo-European *a* with *ha* but with *a*, will seem a mere stratagem: there is only one glottal stop (written phonetically *ʔ*) as it exists today in Danish or Arabic (*alif-hamza*).¹⁶ It seems of great importance that the theoretical assumptions should be grounded on phonetic possibility. Such a reconstructed form as Sturtevant's **dheʔqxa* is a formula which satisfies neither the eye nor the ear.

To summarize thus far, Hittite shows an *h* as a frequent and stable phoneme which can be readily demonstrated to be unconnected with such a consonant or consonants as those in Indo-European from which a secondary *h*-sound has developed. At the same time a general distinction in Hittite orthography between the single and the

¹³ *Lang.* 9.12 ff. (1933). To Cuny (*RHA*, II, 209-10, 1931) this was an Indo-European archaism in Hittite. But Cuvreur points to the constant conservative spelling of *genu*, *gimmant* with *g*, and of *kuis* with *k*.

¹⁴ *Comp. Gr.*, paragraph 66 (1933).

¹⁵ "Parallels to the Stops in Hittite" in *Lang.* 8.177-82 (1932).

¹⁶ G. Noël-Armfield, *General Phonetics*, p. 107.

double consonant, whatever the phonetic nature of the distinction; is observable also in the case of the *h*-sound.

There are, however, two other possible origins for the *h*-sound in Hittite which must be considered. Hittite, with its writing borrowed from Assyria, bears all the traces of a language which has undergone the influences of the myriad neighboring Semitic or Caucasian Asiatic peoples. The possibility that the *h*-sound is of foreign origin is not excluded. A parallel might be sought in the Sanskrit adoption of the so-called "cerebrals" if these indeed come from the aboriginal languages of India.¹⁷ Yet we may easily point out the contradictions in such an assumption:

(1) If the sound were borrowed, one would have expected a certain amount of caprice regulating the insertion or non-insertion of the alien element and a corresponding lack of certainty in the writing, neither of which conditions obtains.

(2) The fact that *h* is surely present in some words of manifest IE origin in just the places demanded by the theoretical conditions to be considered presently, while absent according to the same conditions is, needless to say, a telling argument *if the theoretical conditions can be otherwise justified*. In particular, the infrequency of *h* initially before *e* or *i* is striking. We may dismiss the possibility of a borrowed phoneme.

Another possibility for the *h*-sound as suggested by Walter Petersen¹⁸ is that *h* develops as a "hiatus-avoiding" device, that is to say as a glide sound as in Oscan and Umbrian (Osc. *stahint*, Lat. *stant*; Umb. *ahesnes*, Lat. *ahenis*), an idea which had been put forward much earlier by Marstrand.¹⁹ Here again it will be hard to explain why the sound is so stable in the writing; also, how it has been extended to other positions than the intervocal, notably as an initial, or before or after a consonant. Again, why is it so rare in the initial position before *e* or *i*, and what would be the justification for the single and double writing of the *h*? It will be noticed that Petersen withdrew his suggestion the following year in favor of another

¹⁷ Whitney, *Sanskrit Grammar*, p. 17.

¹⁸ *Lang.* 9.30 ff. (1933).

¹⁹ *Norsk Tidsskrift for Sprogvidenskap*, III, pp. 290-5 (1930).

hypothesis somewhat more in accord with the facts, which hypothesis is as follows:²⁰ "Hittite *h* is a development from a pre-IE laryngeal stop similar to those of Semitic, like Hebrew aleph, which had already dropped its palatal variety (before *ē* and *ī*) before the separation of Tocharo-Hittite. Remaining in its darker varieties (before *ā* *ō* *ū*) it became Hitt. *h*, but was lost in IE proper as well as in Toch. after the latter went its own way." According to Petersen the sound was not originally phonematic until the Semitic substratum of Hittite speakers made it so. These speakers had an ear for such distinctions, caught the laryngeal, which was one way of introducing a vowel sound, and eventually turned it into a spirant(´ > *h*) which survived as such in Hittite. But the sound perished from IE in general elsewhere as non-phonematic. To this one may answer with Couvreur²¹ that such a laryngeal occlusive might reasonably be expected as much before a front vowel as before a back, and certainly the combination of initial *ha-* would have been generalized. On the other hand, in the Accadian texts from Boghazköi just this confusion of *h* and ´ has been observed, a fact which in itself might argue for the truth of Petersen's theory.

It should be observed, however, that, aside from the general criticism of Couvreur mentioned above, many of the details in Petersen's scheme are highly questionable. He is naturally driven to subterfuges in order to explain the existence of ante-consonantal *h* (Hitt. *antuhzas* 'man'), which must be laid at the door of an inexplicable analogy. The denominative verbs in *-ah* which Sturtevant²² connected with IE **āi^e/o* on the basis of *i^e/o*-derivatives of the *ā*-stems are connected by Petersen with the perfect tense (Hittite present tense) of *ā*-denominatives contaminated by an *i*: **newā-anzi* would give according to Petersen **newahanzi*, a form which fits the theory and is to be the starting point for a misdivision by which *h* is considered as suffix. In the first person singular an original **newā-a*

²⁰ *Lang.* 10.312 ff. (1934). This is not to be confused with the use of *h* as a spelling device to indicate a lengthened vowel in Italic generally, as in modern German (*stehen*).

²¹ *Hett. H.*, pp. 236-40.

²² *Lang.* 5.8-14 (1929); *Comp. Gr.*, paragraph 310.

(cf. Sk. *veda*, Gr. *οἶδα*) > **newaha* > **newahi* with extension of the *-i* of such endings as *-mi*, *-si*, *-zi*; then this form was re-made into *newahmi* to avoid confusion with the third singular. I should like to demonstrate that this part of the theory is wholly untenable. First, it is based on the implied assumption that the Hittite present rests on an IE perfect, a view which is by no means universally held: Holger Pedersen²³ thinks the *-hi* conjugation is a blend of the IE perfect and IE thematic conjugation, and Cuvreur derives it entirely from the thematic present type seen in Greek.²⁴ Consequently, Petersen is basing one theory on another, rather than on an established fact. Secondly, while the re-formation of the first person singular of these verbs to the *-mi* class is well attested (but there are also analogical *-mi* forms in the third person singular: e.g. *itala-wahzi*),²⁵ and doubtless for the reasons suggested, few will be convinced by the reconstructed forms, especially since one might expect some trace of an ending **-ha* of the first person singular, if Petersen's picture were true. Thirdly, we may note that it is difficult, although perhaps not impossible, to account for denominatives either in $\tilde{a}i^e/o$ or in \tilde{a} - in a language which has no stems in \tilde{a} . The quantity of the vowel in these Hittite denominatives, it may be added, is by no means certain, due to the nature of the script and the ambiguity of its interpretation: such a spelling as *ma-a-ni-ya-ah-mi* 'I govern,' can tell us nothing about the length of the *a*-vowel; at our present state of knowledge, he is a rash philologist who will mark the quantities in Hittite, especially from purely etymological considerations.²⁶

Cuvreur derives these verbs from IE **oio* > **aya* > \tilde{a} with loss of *i* intervocally and contraction; when the thematic vowel is *e* rather than *o*, the Hittite forms **-ayisi* **-ayizi*, **-ayiteni* > $\tilde{a}isi$, $\tilde{a}izi$, $\tilde{a}iteni$ with "compensatory lengthening of the *a*,"²⁷ thus connecting this type with the Gr. *-όω*, Lith, *-ũju*, Sk. *-aya*; this is partially the view of

²³ *Hitt. und die ind. i.e. Spr.*, pp. 81 ff.

²⁴ *Mélanges Franz Cumont*, pp. 551-73.

²⁵ Cf. Sturtevant *Comp. Gr.*, paragraph 460 and footnote 124.

²⁶ But cf. Pedersen, *Hitt. und die ind. i.e. Spr.*, pp. 1-6. In Old Persian cuneiform the writing of \tilde{i} and \tilde{u} is always ambiguous.

²⁷ *Revue belge de phil. et d'hist.* 17.887-94 (1938).

Pedersen,²⁸ though he generously gives most of the credit for the formation to the IE verbs in *-āie-* seen as one source of the Latin first conjugation, and he even sees traits which recall the Greek type *φιλέω*. For these reasons we may, with almost all linguists, accept rather the view that Hittite *h* does not originate in any IE sound or combination of sounds, that it is not a sound taken over from some one or other of the many languages formerly spoken in Asia Minor, that it is not a transitional sound originating in hiatus nor again a sound not originally phonematic in IE, but rendered so in certain positions by a Semitic substratum. Our conclusion, then, on the basis of the argument thus far and drawn only from the Hittite material, must be that either Hittite *h* has some origin as yet not mentioned, or (which is rendered likely by the subsequent discussion) that it goes back to a sound or sounds in IE elsewhere lost.

The full significance of Hittite *h* and *hh* must be left to a subsequent chapter. It will be our general plan first to discuss in greater detail the theory of Indo-European ablaut advanced by de Saussure and accepted in modified form by Cuny and Kuryłowicz. Next we shall weigh the various arguments which have been advanced in favor of the hypothesis of de Saussure. In the course of this exposition, we shall refute to the best of our ability some extremists who have sought traces of an IE laryngeal where it did not exist. Finally, we shall estimate the hypothesis in the light of the Hittite evidence plus the most convincing of the arguments which may survive our examination.²⁹

I. INDO-EUROPEAN ABLAUT AND THE THEORY OF DE SAUSSURE

It has been known since the Indo-European languages were first scientifically studied that alternation of vowels (ablaut) is an integral part of the morphological and semantic structure of IE. There are two principal types of such alternation, qualitative and quantitative.

²⁸ *Hitt. und die ind. i.e. Spr.*, p. 136.

²⁹ Cf. now Hans Hendriksen, *Untersuchungen über die Bedeutung des Hethitischen für die Laryngalthorie* (Kgl. Danske Videnskabernes Selskab, Hist.-filol. Meddelelser XXVIII 2, 1941). On Sturtevant's *Indo-Hittite Laryngeals* (1942) see the review by G. Bonfante *CP* XXXIX 1944, 51-57.

The first type shows a change in the color of the vowel: *tego/toga*; *φέρω/φορά*. Examples might easily be multiplied to show the fundamental importance of the e/o variation, of which the morphological significance is often clear, e.g. the *o*-grade of the causative is opposed to the *e*-grade of the verb simplex, as *φέρωμαι/φοβέω*; we have seen in the examples above that the thematic noun derivative often shows *o*-grade as opposed to the *e*-grade seen in the verb stem. The usual assumption is that qualitative variation is dependent on the presence or absence of a musical accent in the phrase.¹

Quantitative ablaut is alternation in the length of the vowel, which may disappear completely (*λείπω/λιπεῖν*) or be present in a reduced form (Dor. *ἴσταμι/σταῖός*). It is generally assumed that quantitative ablaut depends upon the presence or absence of a strong stress accent. The reduced vowel which alternates with a long vowel is denoted by the sign *ə* (schwa Indogermanicum); some authorities, notably Hirt, recognize a second intermediate reduced vowel with the symbol *ɐ* (schwa secundum) to resolve cases in which the usual correspondences to *ə* in IE are lacking (schwa should give Indo-Iranian *i*; elsewhere in IE languages, schwa is represented by *a*). We shall be exclusively concerned with this type of ablaut.

Certain difficulties may be pointed out in the facts of quantitative ablaut:

(1) IE presents with root-vowel *e* are the rule, type *πέμπω*. The type in *á* or *ó*, not due to ablaut but original,² as in *ἄγω*, *ὄζω* is uncommon. Of these Hirt remarks, "Bei allen diesen handelt es sich um vereinzelte Fälle. Je länger, je mehr ist alles in den Rahmen der *e*-Verben eingespant worden."³ The same authority is inclined to doubt the existence of an *ā/ō* series, which is at any rate much more limited in scope than the all-important *ē/ō* series mentioned above,⁴

¹ This is not the place for an elaborate discussion of the chronology and non-pertinent details of IE ablaut which may have to be in part revised in the light of the laryngeal hypothesis.

² We use the convenient notation of Couvreur, *á* and *ó* for original, *ə* for ablaut vowels. The much disputed question, whether an original *ó*-series ever existed, will be discussed later.

³ *Indg. Gr.* IV, p. 185.

⁴ *Ibid.*, pp. 182-3. Even the best example, *φημι/φωνή*, is doubtful: see Pedersen in *KZ*, XXXVIII, p. 403 (1902).

and enjoys no morphological function. It will be remembered that Meillet has assigned a very restricted role to the *a*-vowel in IE phonology.⁵

(2) The long vowels \bar{e} \bar{a} \bar{o} regularly all alternate with \bar{a} , this being the viewpoint of Brugmann in his *Grundriss*² I, pp. 174-5. Here Greek often shows an analogical extension of the root vowel in place of the expected *a* ($< \bar{a}$), as $\delta\omicron\tau\acute{o}s$ from $\acute{\delta}\acute{\iota}\delta\omega\mu\iota$, $\theta\epsilon\tau\acute{o}s$ from $\tau\acute{\iota}\theta\eta\mu\iota$, perhaps after $\sigma\tau\alpha\tau\acute{o}s$ from $\acute{\iota}\sigma\tau\bar{a}\mu\iota$, since these three verbs form a triad in Greek inflexion. Brugmann's opinion is shared by Meillet (*Introd.*⁷ pp. 154 ff) and Hirt (*Indg. Gr.* II, § 141), and we adopt it here against the view of Cuny and Kuryłowicz, who see the Greek state of things as original. Brugmann further (*ibid.*, p. 175) asserts that the *e* of Gr. $\gamma\epsilon\upsilon\epsilon\tau\acute{\eta}\rho$, Osc. *genetaí*, Old Welsh *cene-tl*, represents an original IE *e*, not any variety of \bar{a} .⁶ Aside from Greek, there is much agreement in the IE forms which point to a single \bar{a} : cf. Sk. *sthitá-s*, Lat. *fāctus*, *dātus*.⁷

(3) Monosyllabic IE bases (consonant plus vowel type) may end in a long vowel, but never a short one: $*dh\bar{e}$ or $*st(h)\bar{a}$, but never $**dh\check{e}$ nor $**st\check{h}\check{a}$. On the other hand, IE bases of the form, consonant plus short diphthong, are common: $*\widehat{kei}$, $*\widehat{kley}$. It may be reasonable to assume a parallel formation and see $*dh\bar{e}$ and $*st(h)\bar{a}$ as a sort of diphthong.

F. de Saussure⁸ in his *Mémoire sur le système primitif des voyelles dans les langues indo-européennes* of 1879 met these difficulties by proposing that the normal IE base contained an *e*-vowel followed either by a consonantal coefficient, $*se\widehat{gh} < se + \widehat{gh}$, or, by a sonantal coefficient, $*\widehat{kei} < \widehat{ke} + i$. These last ($r\ l\ m\ n\ \dot{i}\ \dot{u}$) formed diphthongs and along with these sonants de Saussure assumed the existence of two 'phonemes' *A* and *O* which had formed similar diphthongs, thus:

⁵ *Introd.*⁷ pp. 166-8.

⁶ Oscan represents \bar{a} by *a*: Osc. *faküad*, Umb. *façia* 'faciat.' Buck, *Gr. of Osc. and Umb.*, p. 65.

⁷ See Couvreur, *Hett*, H, pp. 73-4, but note that $\delta\acute{\alpha}\nu\omicron s$ (incorrectly given on p. 73 as $\delta\alpha\nu\acute{o}s$) is not by Boisacq, *Dict. Et. s.v.* attached to the reduced grade of $\acute{\delta}\acute{\iota}\delta\omega\mu\iota$.

⁸ *Recueil des publications scientifiques*, p. 127, Carl Winter, Heidelberg, 1922.

$$e + A = \bar{e}, \text{ or } \bar{a}$$

$$\partial + A = \text{ablaut } \bar{o}$$

$$e + Q = \bar{o}$$

$$\partial + Q = \text{ablaut } \bar{o}$$

In the vanishing grade, just as **seġh* gave **sġh*, so $(e + A) - e = A$ and $(e + Q) - e = Q$. It follows that:

(1) *e* is the fundamental IE vowel,⁹ together with its ablaut partner ∂ . All other *a* and *o* vowels (not in ablaut) come from the combination of *e* plus *A* or *Q*. *ǣ*γω and *ǫ*ζω (*Agō* and *Qdzō*) show the vocalic function of these phonemes in the initial position.

(2) The zero grades of the long vowels \bar{e} \bar{a} \bar{o} are *A A Q* which vocalize to a sort of *e muet* (=ə) usually of an *a*-color. The *i* of Indo-Iranian is secondary, as is the multiple representation of *a* in Greek.

(3) The IE bases in a long vowel of the type **sthā*, **dhē* may now be compared directly with those in a short diphthong **kei*, **kleu*.

Yet scholars were quick to point to weaknesses in the system of de Saussure, some of which are immediately obvious:

(1) A phonetic justification for de Saussure's equations was not given.

(2) That *e* plus *A* should give both \bar{e} and \bar{a} is unlikely. De Saussure is obliged to assume,¹⁰ on the basis of such unattractive etymologies as Gr. *φθαῖσσαι* beside Lat. *spes* (not mentioned by Ernout-Meillet), Lat. *cera*, Gr. *κηρός* beside Lith. *kóris* (rejected by Ernout-Meillet), that "rien n'indique entre \bar{e} et \bar{a} une différence foncière et primordiale."

(3) Hypothetical forms such as *Agō* (*ǣ*γω) and *Qdzō* (*ǫ*ζω) put *A* and *Q* on a level with the fundamental *e*, there being no reason why the zero grade should appear in these accented forms. The Sanskrit equivalent of *ǣ*γω, as Couvreur¹¹ points out, would then be **ijāmi*, not *ájāmi* as we actually find it.

In 1880, shortly after the publication of de Saussure's system, the Danish scholar, Hermann Möller, in *Englische Studien* (III, 151, note 1), made the excellent suggestion that a third 'phoneme,' *E*, was needed to account for \bar{e} (solving the difficulty noted above) and also offered an account of de Saussure's 'phonemes' as laryngeal

⁹ Marked *a* by de Saussure.

¹⁰ *Op. cit.*, p. 135.

¹¹ *Hett. H.*, p. 79.

consonants.¹² Möller also saw that in such forms as $\check{a}\gamma\omega$ and $\check{o}\zeta\omega$ the phonemes A and Q should be present not in a vanishing grade; but rather, preceding the fundamental e -vowel, they changed the color of the e -vowel and then were lost: $Aeg\bar{o} > Aag\bar{o} > ag\bar{o}$. In a series of subsequent works, Möller built up an elaborate system of his own by which he labored to prove the connexion of IE and Semitic.

According to Couvreur, who discusses the views of de Saussure and Möller in some detail, there are two further defects in the constructions of these two men:¹³

(1) According to de Saussure, $e + A = \bar{a}$, but ∂ (ablaut) + $A = \bar{o}$. That is to say, although ∂ is only a substitute for e (e/o ablaut), still the phoneme A has the power to change the color of e but not that of ∂ .

(2) Neither de Saussure nor Möller really succeed in explaining how a single ∂ vowel can represent all three vowels $\bar{e} \bar{a} \bar{o}$ in reduced grade. On the analogy of the diphthongal bases, which is supposed by de Saussure, the true nature of the sonant should appear in the vanishing grade ($*\hat{k}leu > *\hat{k}lu$); yet precisely here the two distinct phonemes A and Q turn up as the same "voyelle indéterminée."

An advocate of the system of de Saussure, A. Cuny, made further modifications of the system. In his article *Indo-Européen et Sémitique*¹⁴ he introduced a terminology which made explicit what had been assumed by de Saussure, the theory of consonantal ∂ ($=\partial$). In other words, the 'phonemes' of de Saussure were consonantal elements on a par with the sonants and were capable, like them, of vocalization. Cuny assumed the existence of three such elements, taking the Greek evidence ($\theta\epsilon\rho\acute{o}s$, $\delta\omicron\rho\acute{o}s$, $\sigma\tau\alpha\rho\acute{o}s$) as primitive. While this does not seem correct to us, Cuny's article made three very significant advances:

(1) The first serious attempt was made to justify the theory on phonetic grounds. Cuny defined the 'phonemes' as "une sorte d' h dont la durée venait s'ajouter à celle de la voyelle précédente comme

¹² "Diese wurzelhaften Elemente werden als consonantisch (A die tönende, E die tonlose Kehlkopfspirans? O das Kehlkopf- r ?) aufzufassen sein."

¹³ *Hett. H.*, pp. 82-3.

¹⁴ *Revue de Phonétique* 2.101-132 (1912).

dans le type français *tête* venant du latin vulgaire *testa* par un intermédiaire **tehte*.”¹⁵ As a Semitic specialist, Cuny could cite the parallel development by which Class. Arabic *ra*'s became Modern Arabic *rās*.

(2) For Cuny, consonantal *ə* was indeed capable of vocalization but less so than the other sonants. Thus in Latin **strə->*strə>*stṝ>strā-tus* with vocalization of the *r*, but the root **sāg=**seəg* (cf. *sāg-īre*, Goth. *sōk-jan*) shows a zero grade (**səg*) in *sāgax* with vocalization of *ə*.

(3) Cuny made several suggestions as to the nature of the IE root, pointing out that no root ends in a simple vowel, the normal structure was rather consonant plus vowel plus consonant, that apparently anomalous roots like **es* or **ak̂* could be fitted into this theory by assuming an initial laryngeal. This is, in a small compass, an anticipation of the main conclusions of Benveniste's theory of the IE root.¹⁶ In subsequent articles,¹⁷ Cuny defended his position and attempted (as Möller had done) to draw his assumed consonants into close relation with the Semitic laryngeals. We shall not attempt here to follow him in his Semitic-Indo-European hypothesis,¹⁸ since this lies outside our present subject.

In the hands of Jerzy Kuryłowicz the theory of de Saussure has been greatly expanded and considerably altered. We shall take the author's latest definitive statement¹⁹ as a guide to his present theory, since he has expressly modified his opinion in certain points. It is our intention merely to summarize the theory of Kuryłowicz at this point, leaving a discussion of his arguments and those of other linguists to a subsequent chapter. The theory is as follows:

(1) Every original long vowel (i.e. not the result of lengthening or contraction of two vowels) is due to the combination of a short vowel with *ə*. Kuryłowicz uses the terminology of Cuny. The equations

¹⁵ *Ibid.* p. 103, note 3.

¹⁶ *Origines*, Chapter 9.

¹⁷ *Litteris* VII (1930), pp. 149-50; *Revue des Études anciennes* XXX (1928), p. 179; XXXVIII, pp. 492-3; see also *Réflexions sur le type χρῆ et le type ῥχῶ* in *Symbolae Grammaticae in honorem I. Rozwadowski*, vol. 1, Cracoviae, 1927.

¹⁸ See *Revue hittite et asianique* II, p. 14 (1931).

¹⁹ *Études Indo-eur.* I, pp. 27-76.

are then $e + \mathfrak{z}_1 > \bar{e}$, $e + \mathfrak{z}_2 > \bar{a}$, $e + \mathfrak{z}_3 > \bar{o}$; ablaut $\acute{o} + \mathfrak{z}_1 > \bar{o}$. Kuryłowicz assumes three laryngeals. The equation $\acute{o} + \mathfrak{z}_2 > \bar{o}$ is admitted as doubtful, and in individual cases an \bar{o} may clearly, under this system, derive from three possible combinations. Notice that this contraction takes place exclusively when \mathfrak{z} is between a vowel and a consonant.

(2) Intervocalic \mathfrak{z} falls with contraction of the resultant contiguous vowels.

(3) Interconsonantal \mathfrak{z} falls without leaving any trace, except in Greek.

(4) In the position between consonant and vowel, \mathfrak{z} falls but leaves a trace in the Indo-Iranian languages, where $k, t, p + \mathfrak{z} > kh, th, ph$, this being an idea which originated with de Saussure.²⁰ What is usually termed vocalic \mathfrak{z} is defined by Kuryłowicz as the reduced vowel e which survives after the \mathfrak{z} (consonantal) has fallen. It follows that schwa Indogermanicum is only a special case of schwa secundum, this paradoxical conclusion being, as we shall see, essential for Kuryłowicz.

(5) Every Indo-European word with initial vowel has lost an original initial laryngeal whose variety is indicated by the color of the vowel. An initial group of \mathfrak{z} plus consonant was simplified by the loss of the \mathfrak{z} everywhere except in Greek and Armenian: we have here the beginning of the argument from prothetic vowels. In composition and sandhi after a vowel such an ancient group may be detected by the formula, final short vowel before the group \mathfrak{z} plus consonant gives a final long vowel with loss of schwa. This again has reference to a method which Kuryłowicz has explored thoroughly, namely the hitherto unexplained lengthened vowels of the Vedas.

(6) \mathfrak{z}_2 survives in Hittite h . Kuryłowicz is sorely tempted to posit a \mathfrak{z}_4 on the basis of certain IE a -vowels to which Hittite appears to answer with a - rather than ha -.

Even from this outline it is clear that the theory of Kuryłowicz, for better or for worse, is an entirely theoretical structure, with no attempt made to justify it phonetically.²¹ We shall subsequently re-examine his formulae.

²⁰ *Op. cit.*, p. 603.

²¹ "Ce qui pour nous a toujours été une question accessoire," writes Kuryłowicz

The great Danish linguist, Holger Pedersen, has always been a follower of de Saussure and of his own countryman, Möller. He took over the theory of consonantal ə which he explained as a sort of uvular r and denoted by the sign r in an early work, *Les pronoms démonstratifs de l'ancien arménien*,²² and has incorporated the theory of long vowels in his large *Grammatik der keltischen Sprachen*, though he here refers to the sound or sounds by the symbol g .²³ He assumes that between non-syllabic sounds, or between a non-syllabic sound and the beginning or end of a word, pre-IE g becomes IE a , but that it unites with a preceding syllabic vowel of the same syllable to form a long vowel ($\bar{e} \bar{a} \bar{o}$) and drops before a syllabic vowel. The last phenomenon explains the initial alteration $e/o/a$ (that is ge , go , syllabic g) as Greek $\epsilon\tau\iota$, Phryg. $\epsilon\tau\iota$ -, Lat. *et*, but Gall. preverb *ate*-, Old Ch. Sl *otŭ* (from); Gr. $\delta\sigma\tau\acute{\epsilon}\omicron\nu$, Lat. *os*, but Gr. $\delta\sigma\tau\rho\acute{\alpha}\gamma\alpha\lambda\omicron\varsigma$ (*talus*). Furthermore, before a non-syllabic sound pre-IE g unites with the preceding u , i , r , l , y , m to form $\bar{u} \bar{i} \bar{r} \bar{\text{l}} \bar{\text{y}} \bar{\text{m}}$: Lat. *vānus*, Mod. Ir. *fánach* (idle, seldom), *ar fán* (in exile); sometimes, however, the preceding sound remains non-syllabic and g becomes syllabic (i.e. vocalizes): Lat. *vānus*, Goth. *wans* (in need), Ir. *fann* (weak). In Greek and Celtic, both the sonant and the g often become syllabic: $\epsilon\pi\rho\acute{\iota}\alpha\mu\eta\nu$.

In his latest work, *Hittitisch und die anderen indoeuropäischen Sprachen*,²⁴ Pedersen adopts the symbol H for what he now considers a laryngeal consonant and bolsters it with the Hittite evidence. This laryngeal vocalizes (to vocalic ə) in the reduced grade (*facio*), falls between consonants in the vanishing grade (*da-dh-má-*). There are two varieties of H : $eH_1 > \bar{e}$, $eH_2 > \bar{a}$. The existence of a fundamental

(*Bull. de Soc. de Ling. de Paris*, XXXVI, 1935, pp. 35-7), in answer to a criticism of W. Petersen in *Lang.* X, 1934, pp. 307-22.

²² Kgl. Danske Vidensk. Selskab Skr., 6 Raekke, *Historisk og filologisk*, Afd. VI, 3, p. 340, Copenhagen, 1905.

²³ Göttingen, Vandenhoeck und Ruprecht, 1909. I, pp. 177-83. It may be observed that Pedersen considers the development of Indo-Iranian i for ə as secondary, *KZ* (1900), XXXVI, p. 75.

²⁴ Det Kgl. Danske Vidensk. Selskab. Historisk-filologiske Meddelelser. XXV, 2, Copenhagen, 1938; pp. 179-90. Pedersen first proposed this notation in his work, *La cinquième déclinaison latine* (XI, 5 of same series, Copenhagen, 1926), p. 48.

\bar{o} is questioned by Pedersen, and he does not therefore assume a third laryngeal. Pedersen assumes further: (1) $H_2 + e = >a$; (2) a trace of H is seen in the origin of the Indo-Iranian voiceless aspirates, an argument of de Saussure. Pedersen adds that, at least in Indic, a voiced stop preceding H could become a voiced aspirate: this is a novel argument which we shall discuss in its proper place. (3) Pedersen repeats the treatment of H in connexion with sonants, as given above. (4) His treatment of the appearance of H in Hittite varies decidedly from that of Kuryłowicz (for whom only $\vartheta_2 = h$). According to Pedersen, 'diphthongal' eH_1 and eH_2 give Hittite \bar{e} or \bar{a} ; syllabic H_1 and H_2 give Hittite a ; consonantal H_1 and H_2 , however, both appear as Hitt. h which is written double between vowels. This argument is also original with Pedersen and is clearly of great importance for our purposes.

E. H. Sturtevant, one of the earliest to take up Hittite studies in this country, began by assuming that Hitt. h derived from IE bh .²⁵ Later, in contradistinction to Kuryłowicz, he took the position that "Indo-Hittite" contained an original consonantal h that could not be vocalized,²⁶ a vowel a , long vowels \bar{e} \bar{a} \bar{o} whose nil grade was ϑ . A few years later, however, he was converted to the new doctrine which he found "very attractive."²⁷ By 1939 he had extended Kuryłowicz's theory and assumed four laryngeals, the fourth being assumed for cases which show Hitt. a (not ha -) corresponding to IE a .²⁸ He has taken over from the American linguist E. Sapir, an elaborate system of notation: $\text{'} =$ glottal stop of e -color; $\text{'\text{}} =$ glottal stop of a -color; $x =$ post-velar voiceless spirant; $\gamma =$ same voiced (also $A =$ any laryngeal; $A =$ either a -laryngeal, $\text{'\text{}}$ or x ; $E =$ either e -laryngeal, ' or γ ; $\bar{H} =$ any laryngeal still in Hitt., x or γ ; $\text{'\text{}} =$ either glottal stop). It will be observed again that, unlike Kuryłowicz, Sturtevant does not believe in a non-ablaut \acute{o} and does not posit an o -colored laryngeal; he has subdivided Kuryłowicz's ϑ_1 to make his ' and γ . Furthermore, he has suggested that the Greek aspirated perfect and

²⁵ *Lang.* (1927) 3.109-22; *ibid.* (1928) 4.159-70.

²⁶ *Lang.* (1930) 6.149-58.

²⁷ *Lang.* (1936) 12.141-44; 210-13.

²⁸ *Lang.* (1939) 15.145 ff.

k-perfect ultimately imply a laryngeal origin. These last arguments are weak and cannot stand, as we shall see subsequently.

Last of all we may summarize the theory of the Dutch scholar, Couvreur, in somewhat greater detail. It seems to us that insufficient attention has been directed to the work of this scholar, particularly in his most complete attempt at systematization, *De Hettitische H.*²⁹ This work represents a far more thorough study of the Hittite evidence than that of any of the linguists hitherto discussed, together with an ample knowledge of IE and Semitic linguistics; above all, he is strong on the phonetic side and has offered satisfactory phonetic arguments. We should remember that Couvreur has discussed a large part of the Hittite vocabulary from a philological standpoint and cleared the path of a good many errors.

Couvreur assumes three laryngeals: a laryngeal occlusive (◌) in the *e*-series, a voiceless laryngeal spirant (*h*) with *a*-color, and a voiced laryngeal spirant (*c*) with *o*-color. These combine with a preceding *e*-vowel to form the corresponding long vowels *ē ā ō* which Couvreur finds in Hitt. *ē*, *ahh* and *ah* respectively. Initially, he finds the correspondences IE *e*=Hitt. *e*, IE *á*=Hitt. *ha*, IE *ó*=Hitt. *ha*; internally, while he has an example of IE *e*=Hitt. *e*, he assumes the same relation would prevail for IE *á* and *ó*. Couvreur assumes that *e/o* are treated exactly the same in relation to the laryngeals. In the reduced grade, Couvreur shows himself as mediating between the theories of de Saussure and Hirt: the zero grade of *e*(*ē*) is ◌ which either disappears or "develops to a weak vowel which under the influence of *ē* can become a sort of mute *e*,"³⁰ whence IE *ə*=*a*, *i* in IE languages including Hitt. (which shows *a* or zero). The zero grade of *eh* (*ā*) is *h* which turns up as Hitt. *hh*, but in IE is confused with ◌ (which phenomenon Couvreur finds also in IE normal grade initially and internally: ***áhk > **a.k > *āk*) and similarly treated as *ə*. Since the zero grade of *e^c* (*ō*), while not attested in Hittite examples, is *c*, Couvreur assumes a complete parallelism in IE which

²⁹ Louvain, *Bibliothèque du Muséon*, 5, 1937. An earlier, more fragmentary paper with the same title appeared in 1935, *Katholieke Universiteit te Leuven, Philologische Studiën, Teksten en Verhandelingen*, nr. 12.

³⁰ *Op. cit.*, p. 287.

confuses *ə* also with *o* and subjects it to the same treatment. This part of his treatment, while somewhat schematic, does at least offer an explanation of the single IE *ə* which alternates with the three IE long vowels. To us, it seems more satisfactory than the assumption, with Cuny and Kuryłowicz, of three separate representations of *ə*, based upon, to our mind, the unacceptable evidence from Greek.

These, then, are the main features of the several theories which account since de Saussure for aspects of IE quantitative ablaut by assuming consonantal elements no longer present in the IE languages except in so far as they are directly reflected in Hittite and indirectly attested elsewhere. In the discussion which follows, it will be presupposed that the reader has these general features well in mind.

II. VEDIC VOWEL QUANTITIES

Under this heading I propose to follow up one of the principal arguments of Kuryłowicz, which indeed is the one which he has elaborated and used most successfully.¹ We have to do with a series of phenomena (hiatus, sandhi, lengthening of short syllables) which are attested in the oldest Sanskrit texts. A general remark may be made here: it is quite possible, in cases of this kind, to explain away any given form on the basis of metrical exigencies. Kuryłowicz apparently made no use of the elaborate collections to be found in the second volume of Bloomfield and Edgerton's *Vedic Variants* (Phonetics)² whose authors favor in general the rule of Wackernagel³ that lengthenings of short vowels depend ultimately, not on metrical requirements, but on sentence rhythm. Since analogy has also played a part, Kuryłowicz's argument can be convincing only by its cumulative weight.

¹ Although the author's definitive opinions are to be found in *Études Indo-européennes* I, there is more detail in these articles: *Quelques problèmes métriques du Rigvéda*, *Rocznik Orientalistyczny* IV, pp. 196-218 (1926); *Les effets du ə en Indo-Iranien*, *Prace Filologiczne* XI, pp. 201-43 (1927); *Origine Indo-européenne du redoublement attique*, *Eos* XXX, pp. 206-10 (1927); *ə indo-européen et h hittite*, *Symbolae in honorem J. Rozwadowski* I, 1927, pp. 95-104.

² Special Publications of the Ling. Society of America, Philadelphia, 1932.

³ I, paragraph 266a.

We have first the contraction $a^x + \text{ə} > \bar{a}^x$ before a consonant. There are excellent examples brought forward by Kuryłowicz in Sanskrit compounds: Ved. *abhīpá-*, *dvīpá* with $*\text{ə}_2p$ from $*\text{ə}_2ep$, 'water,' Sk. *ap-*; Ved. *āsat-*, 'non-existent,' *abhī śat-* (RV, II 41, 10b; VII 32, 24a) with $*\text{ə}_1s$ from $*\text{ə}_1es$ 'be,' Sk. *as-*; Ved. *avāyati* with $*\text{ə}_1i$ from $*\text{ə}_1ei$, 'go'; Ved. *adhī-vāsá-* with $*\text{ə}_1ues$ enlarged form of $*\text{ə}_1eu$ seen in Lat. *exuo*, Lith. *aūti*, to which cognates one may perhaps add Hitt. *unūa(i)*, 'adorn.'⁴ Examples might be multiplied,⁵ but these suffice for our purposes. Taken by themselves, these forms unfortunately prove little: it is easy to cite Vedic forms where no laryngeal is possible but which parallel the forms just given. I take at random RV *ādeva* or *ádeva* 'godless' to show the variation in length of *a*-privative;⁶ *abhī* appears in the Rigveda before *na*;⁷ *adhīvāsam* is matched by *adhivāsam* in MS;⁸ the stem *ap-*, 'water,' is notably irregular and appears now as *āp-*, now as *ad-*.⁹ Consequently, unless we can establish on other and better grounds the existence of a lost laryngeal, this sort of evidence can be used as confirmation only.

The same may be said of Kuryłowicz's earlier argument derived from hiatus, dissyllabic contracted vowels and the lengthening of a short vowel before a final consonant when the next word has a vocalic initial,¹⁰ together with similar material no longer emphasized by this author, though still retained by him as valid. We have to do with another formula of Kuryłowicz, that of the combination of two vowels after an intervening laryngeal has fallen, $\bar{a}^x + a^x$ (to be thought of as $a^x\text{ə} + a^x > a^x + \text{ə}a^x > a^x + a^x > \bar{a}^x$, this being an example of the law *vocalis ante vocalem corripitur*). Unfortunately, since $a^x + a^x$ also give \bar{a}^x , the existence of an original long vowel is difficult to establish. Kuryłowicz selects as his best examples¹¹ the imperative *pāntu*

⁴ After Murš. *Sprach.*, p. 72.

⁵ Kuryłowicz, *Études*, p. 31.

⁶ *Vedic Variants* II, p. 230.

⁷ *Op. cit.*, p. 250.

⁸ *Ibid.*, p. 250.

⁹ Whitney, *Sk. Gr.*, paragraph 393.

¹⁰ *Rosznik Orientalistyczny*, IV, pp. 196-218 (1928). A vocalic initial implies initial schwa, it will be remembered.

¹¹ *Études*, I, pp. 34-41.

(IV, 4, 12), the indicatives *pānti* and *yānti*, all three to be read with resolution of the long vowel. Compare also Sk. *vāta* < **uéǵnto-*, Latin *ventus*, Goth. *winds*. There are, according to Kuryłowicz, forty-five cases of internal hiatus in the strong cases of radical nouns in *ā*: cf. *tanū-paam*, *gopāā*; the *s*-stem *bhās-* 'light,' is often dissyllabic in the RV, e.g. VIII, 23, 11, while the *ā* of *pānthāh*, 'path,' is five times a dissyllable. This last example is particularly useful for Kuryłowicz's argument since the middle cases show *i* (from *ə*): *pathibhyām*, *pathibhiḥ*. However, the extraordinary inflection of this noun in IE seems to include forms from an *i*-stem,¹² e.g. Old Pers. acc. *paθim*, a fact which Kuryłowicz does not mention. Certainly the examples of radical nouns in *ā* may likewise be easily explained,¹³ e.g. as *ā+m*, just as we have *ī+m*, *ū+m*; the vocalism of such forms as *pāntu* may be similarly analogical.

To sum up, it does not seem to us that these examples in themselves are sufficient to prove the existence of *ə*, since, to quote Kuryłowicz himself, "il est naturellement impossible de décider dans quelle mesure il s'agit, dans chaque cas particulier, d'un archaïsme ou d'une imitation d'un archaïsme."¹⁴ One might better say that any given example permits of another explanation and that only a part of the Vedic material can fit into Kuryłowicz's picture.

III. THE VOICELESS ASPIRATES OF INDO-IRANIAN

One of the suggestions made by de Saussure, though never systematized, concerned the Sanskrit words *prthú-* 'wide,' and *tiṣṭhāmi*, 'I stand,' whose aspiration was explained as due to the combination of *t* and *ə*: "Ces *th* proviendraient d'un *t* i.-e. suivi d'un phonème *ə* régulièrement élisé devant voyelle; ainsi le masculin *prthú-s* 'large' représenterait un i.-e. *pretəús*, devenu *prt'ús* après la chute du *e* radical atone."¹

Kuryłowicz has extended this reasoning to include all Indo-Iranian

¹² See Ernout-Meillet, s.v. *pons*.

¹³ *Études*, p. 36. One suspects that the question of which endings of the *ā*-declension are contracted is not to be as easily resolved as Kuryłowicz imagines.

¹⁴ *Ibid.*, p. 35.

¹ *Recueil*, p. 603.

voiceless aspirates as originating in this way. It follows that such aspiration is analogical in forms of normal grade and in forms with zero grade before a consonant; only in zero grade before a vowel is the aspirate justified (thus, *tiṣṭhati* is justified; *dsthāt* and *sthitā-* are analogical).

To the examples adduced by de Saussure, Kuryłowicz has added the verbs in *-th-* of the ninth Indic class² (*math*, *grath*, *ḡrath*) whose ḡ_2 is seen in their presents (in *nā*, Gr. *νη*, *vā*). The isolated words *pánthāḥ*, *mánthāḥ* and *sakhā* make heavy demands on the author's ingenuity to fit into this picture. Better examples are: the adverbial suffix *-thā* which Kuryłowicz connects with the *-tā* of denominal abstracts as an instrumental ($*t_{\text{ḡ}_2}\bar{e}/\bar{o}$; *tā* is $*te_{\text{ḡ}_2}$), *tathā*, Ved. *pūrvátha*; verbal nouns in *-átha* which would be the thematic form of the same suffix, *stavátha*, *ravátha*; the superlative suffix *-iṣṭha* (cf. the *-tha* of cardinal numerals, *caturthā-*, *pañcathā-*) which is an adjective formed with the same abstract suffix *-tā* on the base of the comparative; the perfect second singular ending *-tha* ($*t_{\text{ḡ}_1e}$).³

It may be added that Kuryłowicz has explained the historical process of this development with what seems to us signal success. Pointing to the well known rule that such roots as $**pedh$ or $**pegh$ (voiceless stop and voiced aspirate together) are impossible, and recalling the type of progressive assimilation (Law of Bartholomae) seen in Indo-Iranian by which *bh*, *dh*, *gh* + *t* > *bdh*, *ddh*, *gdh*, Kuryłowicz asserts that the latter process antedates the existence of the voiceless aspirates, since otherwise one would expect *bh* + *t* > *pht*, or *pṭh*. Furthermore, the law of Grassmann by which $*bhéudheti$ > *bódhati* implies a relation felt between *b* and *bh*, and thereby the sonority of *bh* or existence of *ph*. Kuryłowicz pictures the development thus:⁴

(a) Action of Bartholomae's Law, of IE date, the voiced aspirates not being felt as voiced until voiceless aspirates came into being. Similarly *m n r l*, though voiced from the phonetic viewpoint, had

² *Études*, pp. 46–50.

³ Note that Kuryłowicz does not see an agreement in Gr. *-θα*. He thinks that $*-ta$ was original; the form proper after ϕ , θ , χ was generalized. *Ibid.*, p. 52.

⁴ *Études*, p. 51.

no voiceless counterparts and were not felt as either voiced or voiceless.

(b) Rise of voiceless aspirates in Indo-Iranian times.

(c) Dissimilation of aspirates in Indic period.

The entire phenomenon is made plausible by the assumption (originally Siebs, in *KZ*, XXXVII, p. 293) that after initial *s* an IE *bh*, *dh*, *gh* gave *sph*, *sth*, *skh* in Indo-Iranian. The combinations *sbh* etc. do not occur and the Greek cognates, according to Kuryłowicz, very properly show $\sigma\phi$ -, $\sigma\theta$ -, $\sigma\chi$ - while Indo-Iranian (*s*)*ph*, (*s*)*th*, (*s*)*kh* corresponding to IE (*s*)*p*+*ʒ* etc. appear as Gr. (σ) π - etc.; thus Gr. $\sigma\tau\bar{\alpha}$ -, Sk. *sthā*, Lat. *stare*, Old Sl. *statī*; Gr. $\pi\lambda\alpha\tau\acute{\upsilon}\varsigma$, Sk. *pr̥thú-s*; Gr. $\pi\acute{\alpha}\tau\omicron\varsigma$, Lat. *pons*, Sk. *pathi*-; Gr. $-\iota\sigma\tau\omicron\varsigma$, Sk. *-iṣṭha*, Goth. *-ists*. A few other good examples are Sk. *rátha*, Av. *raθa*, Lat. *rota*; Sk. *asthi*-, Gr. $\acute{\omicron}\sigma\tau\acute{\epsilon}\omicron\nu$. Kuryłowicz rightly rejects as examples of supposed voiceless aspirate Gr. $\pi\lambda\acute{\alpha}\theta\alpha\nu\omicron\nu$ and the ending $-\theta\eta\varsigma$ of second person singular aor. pass., a view for which he has good authority.⁵

This argument seems thoroughly sensible, the more so when it is compared with the exaggerated doctrine of E. H. Sturtevant in an article entitled *The Indo-European Voiceless Aspirates*.⁶ Sturtevant, in order to protect his 'Indo-Hittite' hypothesis, carries the origin of the voiceless aspirates back to a pre-IE period: 'Indo-Hittite' **plétHus* > IE **pl̥thús* > Sk. *pr̥thú-s*. He is then obliged to assume the loss of the aspiration, outside of Indo-Iranian, except in a few cases, many based on dubious etymologies: what Sturtevant terms the 'regular' treatment of *th*, *ph*, *kh* in Greek (θ , ϕ , χ) is rare and suspect. For example, Sk. *phalyam*, 'flower,' is not connected with Gr. $\phi\acute{\upsilon}\lambda\lambda\omicron\nu$, Lat. *folium* in the dictionaries of Ernout-Meillet, Walde, or Boisacq (expressly rejected in Walde); that Lat. *vibrare* could correspond to Sk. *vyáthate* seems to defy phonetic law and is not mentioned by Ernout-Meillet or Walde (both **ueip* and **ueib* are well attested, cf. Sk. *vepate*, 'trembles'); the vocalism of $\sigma\theta\acute{\epsilon}\nu\omicron\varsigma$ as well as its sense militates against the proposed etymology **sthanos* which

⁵ *Ibid.*, p. 52. First rejected by Walde-Pokorny II, p. 63; for second, cf. Hirt, *Griechische Laut- u. Formenlehre*, p. 558, Meillet-Vendryes, *Gram. comp. des langues classiques*, p. 215.

⁶ *Lang.* 17.1-11 (1941).

is not in Boisacq (Sk. *saghnóti*, 'take charge of,' itself not too good); the proposed etymology which would connect Lat. *radius* with *rota*, rather than with *radix*, on the basis of Indo-Hittite **r̥tAiyos* > IE **r̥thyos*, 'pertaining to a wheel' is not satisfactory as to sense. The primary meaning seems to have been a stick (= *ῥάβδος*), then a ray of the sun (= *ῥᾶτις*), then finally the 'spoke' of a wheel. Naturally the sound change involved requires ample, secure etymologies before we may assume it. If Sk. *spandate* 'quivers' and Gr. *σφαδάζω* are parallel, as Boisacq thinks, one should expect aspiration in the Sanskrit word; the proposed connexion of Lat. *-idus* and Sk. *-atha* is to be rejected on phonetic grounds, since the assumed laryngeal cannot both aspirate and voice, especially as *ǵ₂* is voiceless for both Kuryłowicz and Couvreur. Neither in sense nor formation do *jivatha-s* and *vividus* belong together. Until more convincing etymologies are brought forward, we reject this sound change.

Meillet, it may be noted, has observed⁷ that not all the voiceless aspirates of Indo-Iranian may be explained as due to a laryngeal, an invalid objection which is echoed by Couvreur.⁸ The latter author adduces some examples from other languages of the combination voiceless stop plus laryngeal occlusive: in Accadian, Chitimacha, and Armenian a voiceless aspirate is not so produced. Needless to say, this is vitiated by the fact that Indo-Iranian is none of these languages. Pedersen⁹ in proclaiming his adherence to the doctrine of de Saussure on this subject mentions: (a) the rarity of the voiceless aspirates in Indo-Iranian; (b) the continual alternation between simple voiceless stop and voiceless aspirate; (c) the extraordinary rarity of voiceless aspirates before a liquid — there is no Sanskrit word in *khr-*, *thr-*, *phr-*.

In our opinion, the solution of Kuryłowicz is most convincing here, not only for these reasons, but for the very neat way in which the evolution of the voiceless aspirates can be traced in Indo-Iranian by being intimately associated with well known phonetic laws in these languages. There remain, it is true, several troublesome irregularities

⁷ BSL, XXIX, pp. 60-2 (1928).

⁸ Hett. H, p. 301.

⁹ La cinquième déclinaison latine, p. 48¹.

(Sk. *sphurati*, Lat. *sperno*, but Gr. σφυρόν as well as σπαίρω), which are to be variously explained.

IV. VOICED ASPIRATES DUE TO A LARYNGEAL; VOICING DUE TO LARYNGEAL

Another argument urged by Kuryłowicz is that one might expect *a priori* that just as *p, t, k + ə > ph, th, kh* in Indo-Iranian but *p, t, k* elsewhere, so *b, d, g + ə* should give *bh, dh, gh* in Indo-Iranian but *b, d, g* elsewhere in IE. He is able to adduce four examples:¹ Sk. *máhi*, Gr. μέγα, Goth. *mikils*; Sk. *duhitā*, Gr. θυγάτηρ; Sk. *ahám*, Gr. ἐγώ, Goth. *ik*; Sk. *hanuh*, Gr. γένυς, Goth. *kinnus*. Kuryłowicz sees *ǵ_{2e}* (>*ǵ₂*) in the first two, *ǵ* of the particle *-aem* (cf. Lat. *id-em*) in the third, and he cannot analyze the fourth. While these examples are good, so far as they go, they do not prove the large thesis of Kuryłowicz: since in all these cases we have to do with the voiced guttural alone (cf. the unexplained relation of Sk. *hṛd-*, 'heart,' to Gr. καρδία, Lat. *cor*), one is compelled to wonder whether these few exceptions were not better explained in some other way.² Note that the **gh* appears in some forms of *mahant-* where it does not fit Kuryłowicz's rules; cf. also Sk. *majmán-*, 'size.'

Holger Pedersen has discussed this last word at length,³ assuming that the adjective was an *ā*-stem but inflected somewhat like Gr. πατήρ: nom. masc. **megā-s*, acc. **megā-m*, gen. **megh-os*, neut. nom. **megā* (Sk. *máhi*, Gr. μέγα). He is thereby led to explain the vowel of Gr. μέγας and μέγαν as analogical, which seems difficult. With reference to Hitt. *me-ik-ki-is*, 'large,' Pedersen assumes that *g+H* accounts for the Hitt. *-kk-* by assimilation, so that the Hittite form corresponds to Ved. *mahī* (Hitt. feminine adjective reshaped as *i*-stem); on this insecure basis, he assumes a sound law for Hittite by which *b* or *bh*, *d* or *dh+H* would give Hitt. *-pp-*, *-tt-*, and he compares Hitt. *suppis*, 'ritually clean' with Sk. *su-bhānu-*, 'beautifully shining,' Ir. *bán*, 'white.' Note however that this etymology is

¹ *Études*, p. 53.

² Cf. Brugmann, *Grundriss* I², p. 634. Foy in *KZ*, XXXV, p. 19 (1899). Perhaps *mah-* followed the analogy of *bṛhant-*.

³ *La cinquième décl. lat.*, pp. 47-50; *Hittitisch*, pp. 36-7.

by no means convincing; the Hittite word shows a different formation directly from the root, while the semantic connexion is not certain since *suppis* also means 'holy'⁴ which may well be the basic meaning. If the assumption of Sturtevant⁵ is sound, Hitt. *mekkis* may be only an exceptional spelling variant for the expected **mekis*.

Our conclusion here (unlike that in the case of the voiceless aspirates) must be that the evidence for such Indo-Iranian aspirates as arise from the combination of voiced stop plus laryngeal is too inconclusive to permit any dogmatizing. The particular reflection of this process assumed by Pedersen in Hittite seems to us even more doubtful, especially since it is supported by only two examples and implies, contrary to the evidence, that Hittite *h* is not a stable sound. Even Pedersen admits that this type of Indo-Iranian voiced aspirate is exceedingly rare,⁶ but he does not offer a reason for this, in itself, inexplicable rarity, nor explain why only cases with **ġ* are attested.

A further assumption made by Kuryłowicz is that the *b* of Sk. *pībati*, 'drinks,' is due to the combination of *p* and *ǵs*, the root **pō* being interpreted as **peǵs*.⁷ From this lone example Kuryłowicz deduces that *ǵs* can voice a preceding stop in IE times (Old Ir. *ibaim*, Lat. *bibo*), while, as we saw, he thinks that *ǵs* aspirates a preceding stop (voiced or voiceless) in the Indo-Iranian period. The usual explanation that *p* becomes *b* by intervocalic voicing is rejected by Kuryłowicz as not occurring elsewhere in this verb.⁸ The Faliscan *pīpafo* (unless we think it a writing for **bibāfo*) is not mentioned here by Kuryłowicz, though the precise relationship of this form to the Latin ones must be somehow explained. Pedersen⁹ seems to prefer the view of Thurneysen¹⁰ who held that an initial IE *b* was replaced by *p*, so that Old Ir. **ebraid*, 'will give,' (loss of initial *p*) corresponds to Gr. *πορᾶν*; *pōtāre*, then, originally had initial *b*, and

⁴ See Sommer and Falkenstein, *Die hittitisch-akkadische Bilingue des Hattusili I*, München, 1938, s.v.

⁵ CG, p. 83. He assumes contamination with the root of *μῆκος*, *macer*.

⁶ *La cinquième décl. lat.*, p. 48¹.

⁷ *Études*, pp. 54-5.

⁸ But still cf. RV *pībadhyāi*, Av. *-piba*?

⁹ *Hitt. und die and. i.e. Spr.*, p. 188³.

¹⁰ *IF Anz.* XXII, 65 (1908).

one may connect *de-bilis* with *polleo*, *pasco* with βόσκω, *pinguis*, παχύς with Sk. *bahu-*. It seems to us that several examples in Irish of the alternation of *p* and *b* had best be explained as dissimilation or voicing from a following liquid. It will be observed in any case that the vocalism of these words expressly excludes the conditions postulated by Kuryłowicz (zero grade before a vowel); besides the example of Thurneysen **ebraid* seen in *ebarthi*, 'will grant it,' one may cite the preterite *leblaing* from *lingid* 'leaps'¹¹ and the analogically formed future *no-dn-eblae* from *alid*, 'nourishes,' together with the suppletive future *ebloid* to *ag-*, 'drive,' if this is from the root **pel*.¹² These Irish examples show clearly that in certain reduplicated forms with initial *p*, or which were felt by analogy to contain initial *p*, the second *p* was changed to *b*, the very same process that we may reasonably assume for Sk. *pibati*.

Above all, one may urge against this argument of Kuryłowicz the sound phonetic objection of Couvreur:¹³ since Kuryłowicz describes his \mathfrak{z}_3 as the voiced variety of \mathfrak{z}_2 , which aspirates a preceding stop (voiced or voiceless), one expects aspiration also with \mathfrak{z}_3 and Sk. **pibhati*, rather than *pibati*.

Our opinion is that the question of Indo-Iranian voiced aspirates from voiced stop plus \mathfrak{z} cannot as yet be decided; the voicing of a preceding stop by \mathfrak{z} ¹⁴ we think we have sufficiently disproved.

V. THE VOCALIZATION OF \mathfrak{z}

An integral part of every theory involving laryngeal consonants is necessarily the reconciliation of the well-known facts of IE ablaut (reduced and vanishing grades) with some explanation of the process in terms of these same laryngeals.

To de Saussure, as we have seen, the diphthongal stems were parallel to stems in *e* + *A* or *Q* so that the reduced grade of these latter

¹¹ The process is the same even though this word should turn out to be analogically formed. See Pedersen, *Gr. der K. Spr.*, II, p. 368.

¹² But cf. Pedersen and Lewis, *A Concise Comparative Celtic Grammar*, p. 334.

¹³ *Hett. H.*, p. 300.

¹⁴ A few further examples of voicing chiefly in Hittite as presented by E. H. Sturtevant, *Lang.* 16.81-67 (1940), will be discussed in another place.

was *A* or *Q* just as the reduced grade of *ei* or *eu* is *i* or *u*. But the difficulty of this explanation was to equate *A* and *Q* with the IE representatives of *ə* actually found in the reduced grade, and de Saussure, who was not interested in framing an entire system, never worked out the solution. It seems likely, however, that he thought that *A* and *Q* were somehow converted (=vocalized?) into a mute *e* (= *ə*) which is directly represented in IE except in Indo-Iranian: "On est donc amené à conclure à la diversité, sinon tout à fait originaire, du moins proethnique du phonème *A* et de la voyelle qui a donné l'*i* indo-iranien. Nous croyons que cette voyelle était une espèce d'*e* muet provenant de l'altération des phonèmes *A* et *Q*. . . . Que cette voyelle indéterminée soit une dégénération des voyelles *A* et *Q*, nous ajoutons par hypothèse: seulement de ces voyelles, et non pas, comme on pourrait croire, un phonème distinct de tout autre dès l'origine. . . ." ¹ The reader will observe that this hint in de Saussure is elaborated with much improvement in the system of Couvreur which we sketched in our second chapter. ²

Kuryłowicz began by assuming ³ that while a vocalization of *ə* was barely possible, the normal process in the reduced grade involved the development of an anaptyctic vowel after the laryngeal element and before the following consonant: $*dh_{\alpha_1}t\acute{o} > *dh_{\alpha_{1e}}t\acute{o} > *dh_e t\acute{o}$ (which is treated as *ə*) $> *dh\acute{e}to$, cf. Sk. *hitá*, Gr. *θετός*.

In his *Études* Kuryłowicz has given up this conception. Now he is of the opinion that the normal zero grade is the complete zero grade with loss of *ə* — that *dh* is the normal zero grade of $*dhe_{\alpha_1}$ within a word (cf. *da-dh-má-*). Initially the combination of consonants renders such a group impossible; consequently, the reduced grade appears here but can not be distinguished externally from the normal grade; *pāmáḥ* ($*p\acute{e}_{\alpha_2}m\acute{o}$) ⁴ shows the vocalism of *pāmi* ($*p\acute{e}_{\alpha_2}mi$). When in this position, however, representatives of IE *ə* appear, we are supposed to have examples of samprasāraṇa which stand in what

¹ *Recueil*, p. 167.

² For the opinion of H. Möller on the vocalization of laryngeals, so far as it can be expressly determined, see Couvreur, *Hett. H.*, pp. 304-5. We have already outlined the thought of Pedersen, Cuny, and Couvreur on this point.

³ *Prace Filologiczne*, XI, pp. 201-43.

⁴ *Études*, p. 57: not $*pimáḥ$.

is called "Schwebeablaut" with relation to the normal grade. This last is no more than the two-fold form of the root assumed by Benveniste:⁵ "Schwebeablaut" would be shown by IE **per-k* beside the samprasāraṇa form **pr-ek*. As we have seen, in Kuryłowicz's system the normal development of the base **dheḡ₁* is: normal grade **dhē*, zero grade in initial **dh_hḡ₁* > **dhē*, zero grade internally **dh*. But the corresponding samprasāraṇa form **dhḡ₁e* has a zero grade **dhḡ₁* and reduced grade **dhḡ₁ē*: in this last position alone Kuryłowicz thinks that the reduced vowel (lost everywhere else) is preserved and converted, under the influence of the preceding laryngeal, into the ordinary *ə* of IE (of which, as we remember, there are three varieties for Kuryłowicz).

It follows that "on s'est toujours senti mal à l'aise en voulant grouper le rapport *ā**: *ə* sur une ligne avec *ei/i*, *eu/u*, *r/r̥*"⁶ as de Saussure had done. The parallel *kei:ki̯ = dhē:dhə* is false, since *dhə* is the reduced grade of the samprasāraṇa form of the root, not of *dhē* directly.

We may mention here some of the evidence used by Kuryłowicz. The R̥gveda shows radical presents from roots in a long vowel with the long vowel (and not *i* < *ə*) in weak forms: the roots *pā* (protect), *pā* (drink), *çās* (order) are so cited. Again, the past participles in *-to*, *-no* and abstracts in *-ti* from the roots **dhē*, **st(h)ā*, **dō* have a different vocalism in their "northern" (German, Baltic, Slavic) and "southern" (Greek, Italic, Celtic) representatives. Thus on the one hand, Gr. *θερός*, *σῆρός*, *δορός*: Lat. *fāctus*, *stātus*, *dātus*: (Celt. **upo-stātos* >) Old Ir. *fossad*, W. *gwastad*; but OHG *gitân*, *tât*: Lith. *stóti*, *dúoti*; Old Slav. *dati*, *stati*. Indo-Iranian shows a split, the Indic branch showing *hitá-*, *sthitá-* and *-tta-* (as well as *dāta-*, *dita-*, *datta-*) while the Iranian has only *dāta-* (for **dāta* and **dhāta-*) and *stāta-*. For Kuryłowicz these differences are derived from a "Schwebeablaut" variation: such a form as *hitá-* (weak grade of *æe*) could not lose its vowel because of the consonant cluster. Working largely with Indic material, he then discusses⁷ various morphological categories

⁵ *Origines*.

⁶ *Études*, p. 57.

⁷ *Études*, pp. 60-72.

which contain *i* (< *ə*) to prove that this is a weakening of *ǵe*. He is obliged to term the alternation of Gr. *φημί/φάμεν* secondary (analogy of *ἵστημι/ἵσταμεν*), and he finds other forms which must be so explained. The assumption throughout is that *ǵ* is too consonantal to be vocalized: thus the so-called "Starre Wurzeln" of Sanskrit in initial sonant (or stop plus sonant) do not show the *ā̃*/*ə* variation, because a second form of the root is impossible: **rā̃* 'give' forms *rāta-* since **rǵe* is comparable to *r*+stop. Yet from **mā̃* 'measure' such forms as *mitá-* are not explained. Such roots as *ǵās*, *khād*, which admittedly alternate with forms in *i*, do not do so in the same paradigm: however, Kuryłowicz does not offer any explanation why this particular variation of the roots in question (and no other) should occur at all.

Since this entire explanation of the reduced grade is so highly theoretical, it seems not unreasonable to direct against it certain theoretical objections. Why, for example, is the reduced vowel, preserved only *after* a laryngeal occlusive⁸ but not before it? Or again, why should the combination *eǵ* give *ā̃* in an initial syllable, while the reduced vowel and the laryngeal both disappear when in the interior of a word?

Needless to say that it is much easier to explain Av. *dāta-* (Sk. *hitá-*) on the basis of normal grade carried over by analogy: this seems better than the assumption of two separate forms of the base. This remark applies in general to the other examples of "Schwebe-ablaut" noted above. Another general observation might be that this theory of Kuryłowicz does not embrace enough phenomena to make up for his break with the theory of de Saussure in the matter of the parallelism of *ḱei/ḱi* and *dhē/dhə*. As we shall see subsequently, Kuryłowicz assumes a vocalization of *ǵ* in the prothetic vowel of Greek and Armenian, an admission hard to reconcile with the tenor of this present argument.

Some further objections of detail are raised by Cuny,⁹ who thinks

⁸ The Hebrew parallels cited by Kuryłowicz (*op. cit.*, p. 56¹) are utterly repudiated as false by Cuny in *Revue des ét. anciennes*, XXXVIII, pp. 70-1 (1936), as well as by Couvreur, *Hett. H.*, p. 308.

⁹ *Op. cit.*, p. 72.

that Sk. *dadmá-*, *dadhmá-*, instead of being ancient, are really syncopated from *dadimá-*, *dadhimá-* (cf. Gr. *δί-δομεν*, *τίθεμεν*)¹⁰ to avoid a succession of short syllables. The same result was attained by a different method, namely, the lengthening of *i* (< *ə*) to *ī* in such words as *pr̥nīmāḥ*, according to Cuny. There seems, therefore, to be no basis for Kuryłowicz's gratuitous assumption that this last form rests on **pr̥nīmāḥ*, especially when his "proof" takes the form of saying, "Il est licite d'admettre à priori le remplacement par *ī* d'un ancien zéro plutôt que d'un ancien *i*."¹¹

An explanation of the weak grade which, like that of Kuryłowicz, makes use of reduced vowels and a consonantal (non-syllabic) laryngeal is offered by E. H. Sturtevant.¹² We mention it here for the sake of completeness although the precise scheme has never been formulated: it may be presumed to differ only in minor details (viz., *ə* is from reduced vowel *before* a laryngeal rather than after) from that just discussed.

VI. THE PROTHETIC VOWEL

One of the most important arguments for the existence of laryngeal consonants in Indo-European has been advanced in connection with the prothetic vowel of Greek and Armenian. We may summarize it thus: an initial laryngeal, which fell elsewhere in Indo-European, is still to be detected in some cases in the prothetic vowel of these two languages, and the presence can be confirmed (if a laryngeal spirant is concerned) in the initial *h* of the Hittite cognate. Benveniste, to whose theory of the IE root we have referred, has provided a schematization of this phenomenon; his methods and the general argument of Kuryłowicz for the reduced grade form the nucleus for an article on the subject, *The Prothetic Vowel in Greek*¹ by a disciple of Sturtevant's, Mr. William Austin. In this chapter we propose to treat of the prothetic vowel and several related questions — the so-called

¹⁰ We have already mentioned Kuryłowicz's theory that interconsonantal *ə* drops *except in Greek*.

¹¹ *Études*, p. 45.

¹² *Lang.* 17.181-188 (1941).

¹ *Lang.* 17.83-92 (1941).

Attic reduplication, lengthenings in Homer, cases of prothesis alternating with *spiritus asper*, and so on, as advanced by Kuryłowicz, Benveniste, and Austin and criticized by Couvreur. The reader must keep in mind that all of these men assume that IE roots in the initial vowel e.g. **es*, **ed* had an original laryngeal occlusive (glottal stop) which has been lost everywhere, even in Hittite. It must also be remembered that for Kuryłowicz, the Greek triple representation of *a* is ancient and for this reason the prothetic vowel appears as *a*, *ε*, or *ο* depending on the variety of laryngeal concerned (Armenian has a single representation and a corresponding single prothetic vowel). The remark of Meillet² that "si la prothèse devant les sonantes résulte d'un ancien **a*, on ne s'explique pas qu'elle soit une particularité du grec et de l'arménien" must not be allowed too much weight: by the same reasoning, why should Indo-Iranian alone show *i* from *a*, why do the Celtic languages show a complete loss of initial *p*?

The situation in Greek is complicated by many factors. It is customary to say³ that prothesis before initial *r* is regular: Gr. ἔρεβος, Goth. *riqis*, Arm. *erek* 'evening'; Gr. ῥέγω, Lat. *rego* (an exception would be ῥέζω 'color' beside Sk. *rājyati* 'be red'). Before *l m n y* the phenomenon is not so regular; here the possibility of prefixes too may not be excluded (*a* *privativum* from **y*, or *a* from **sm*, cf. ὄπατρος). Some traces of umlaut are possible for ἔρεφω, ὄροφος. Hirt suggests ablaut variations as a further source and admits prothesis only before *r*. The fact that initial *r* is not found in Hittite,⁴ Luwian, Mitanni, Lydian, Lycian, or modern Turkish seems to point to a widespread phenomenon throughout Asia Minor; the "influence of the substratum" must, of course, not be overlooked. Here we may mention, as has not been done, the prefixed *a-* of Hattic (a deictic element) which Kretschmer⁵ has amply proved to have entered into many proper names of Asia Minor where we find double forms with or without *a-*. Thus, Homer knows a city of Ἀπαιός (B 828), but

² *BSL*, XXIX 60-2 (1928).

³ See Schwyzler, *Gr. Gr.* I, pp. 411-13; Hirt, *Handbuch der Gr. Laut- u. Formenlehre*, pp. 183-4, with the references given there.

⁴ First demonstrated by Hrozný, *Spr. der Heth.*, p. 128.

⁵ *Zur ältesten Sprachgeschichte Kleinasiens in Glotta*, 21.76-100 (1933).

Παισός in E 612; cf. Ἄμαρδα and Μάρδοι. Clear traces of this sort of prothesis appear in certain Greek words, as ἄσταχυς, στάχυς; ἀσπάλαξ, σπάλαξ; ἄπιον (*a-pisom) but Lat. *pīrum*; ἀσταφίς, σταφίς. Some may prefer, however, to explain certain of these as due to the consonant cluster.

According to the theory of the root advanced by Benveniste, the IE verbal root may receive one and only one suffix. If the root is in its first form (cons. plus *e* plus cons.), the suffix must be in zero grade; if the root is in its second form with zero grade (cons. plus cons.), the suffix is in normal grade. Furthermore, the root in its second form is capable of adding an increment ("élargissement") of zero grade. Thus one may have I *der-k or II *dr-ek or, with increment, *drek-s (Sk. *draks-*), but never **derks or **drekes. The converse of this theorem is important for our purposes: a theme which admits increments must be in form II.⁶ It is clear that this principle, from its very clarity may lead to some dangerous reconstructions, as well as some new etymologies. Given a theme **uelp-* (cf. Gr. *ἐλπω* Lat. *volup*) in form I, one posits a form II **ul-ep* which accords well with Lat. *lep-ōs*, *lep-idus*.

As an example, one of the best, which ties together this theory and the laryngeal theory, consider Benveniste's discussion⁷ of the root **nek* 'destroy,' Lat. *neco*. Since this root shows increments in -y- (Sk. *naçy-a*), in -s- (Lat. *noxā*) and in -t- (*νέκ-τ-αρ*) but no suffix, Benveniste concludes by the principle just cited that the root is already suffixed in -ek and is therefore a form II with laryngeal: **en-ek* to which the corresponding form I is **en-k*. But this latter does in fact appear in Celt. **ank-* (O. Ir. *éc*, W. *angeu*, 'death') and Gr. *ἀν-άγκ-η* while Hittite actually shows the laryngeal in *henk-an*,⁸ "mort fatale."

Benveniste's doctrine may therefore be summarized in his own words:⁹ "A l'état II de la racine, les trois variétés de *ə* devant con-

⁶ *Origines*, p. 154.

⁷ *Origines*, pp. 154-5.

⁸ The appositeness of the Hittite example is not vitiated, despite Couvreur (*Hett. H.*, pp. 122-9), if the original meaning should be 'sickness' rather than 'death.' But the vocalism is wrong on Benveniste's own theory (*op. cit.*, p. 149): we expect **hankan*. And Benveniste does not account for the missing prothesis in *νέκταρ*, *νέκυσ* (**nek-*). One expects **ἀνέκταρ*, **ἀνέκυσ*.

⁹ *Op. cit.*, p. 152.

sonne se conservent par les trois timbres vocaliques *ε*, *α*, *ο* sous forme de 'prothèse,' tandis que les autres dialectes en ont perdu tout vestige." His best examples seem to be:

Theme I

- **ǝ₂el-g*: ἄλγος
- **ǝ₂el-k*: ἄλκη
- **ǝ₃el-k*: ὄλκ-
- **ǝ₃er-g*: ὄργυια
- **ǝ₂eu-g*: αὐγεο

Theme II

- **ǝ₂l-eg*: ἀλέγω O. Ice. *lǫkr*.
- **ǝ₂l-ek*: ἀλέξω; Sk. *rakṣ-*.
- **ǝ₃l-ek*: ὀλέκω.
- **ǝ₃r-eg*: ὀρέγω, *rego*.
- **ǝ₂w-eg*: ἀφέξω, Sk. *vakṣ-*.

With this characteristically clear and reasonable formula in mind, let us now consider the article of Mr. Austin previously mentioned.¹⁰ It should be stated that this author believes in four laryngeals, following Sturtevant: the "glottal stop of velar color" he seems to adopt from sheer complacency, since it does not figure on the same basis in any of his reconstructions. His assumption seems to be, like Benveniste's, based on a double theme: Theme I would be Cons.+*e*+Cons. (+Cons.); Theme II is Cons.+*ɸ*+Cons.+*e* (+Cons.). This clearly involves the assumption that when the first consonant is a laryngeal, it will be lost in Theme II with the reduced vowel then becoming re-voiced in Greek as the prothetic vowel. The reduced vowel is treated as *ǝ* and the color of the prothesis is accordingly a Greek innovation. The second laryngeal ? here "unites with a following liquid or nasal to make it long and voiceless."

Austin begins by giving a list of nine examples which fit into this scheme, some of which we have already cited from Benveniste. Two of these seem to us excellent:¹¹

Theme I

- **'ed* 'eat': *edō*, *admi*.
- **'es* 'is': *est*, ἐστί.

Theme II

- **'ɸde-n* 'tooth' *dens*, Gr. ὀδών, Arm. *atamn*, Hitt. *atanz* 'eaten.'
- **'ɸsent* 'are' *sunt*, Hom. Gr. ἔασι, Hitt. *asanzi*.¹²

¹⁰ *Lang.* 17.83-92 (1941).

¹¹ We repeat the terminology: *ʔ* = glottal stop of palatal color, *ʔ* = glottal stop of velar color, *x* = voiceless laryngeal spirant, *γ* = voiced laryngeal spirant, *A* = any laryngeal except *ʔ*. (Sapir's *A* = any laryngeal.)

¹² This last form may be vowel assimilation, however, in our opinion, with the vowel of normal grade.

Of the rest, some seem to us entirely at fault. Thus for

* [?] <i>elbh</i> 'white': <i>albus</i> ,	* [?] <i>ylebh</i> : Gr. λόφος 'crest, ridge,'
ἀλφός, Hitt. <i>alpas</i>	but Hom. ὑπὸ λόφον.
'cloud.' ¹³	

there seems to be no semantic reason for connecting the two assumed bases: even if "crest" were the original meaning, which is unlikely, a horsehair crest would not be necessarily white,¹⁴ nor would its color naturally be the reason for its name (cf. λοφία 'mane'). The two bases **xewy* (*avis*) and **x̣wey* (Sk. *vayas*, *ves*: αἰετός) are possible, but αἰετός cannot be attached to this second base (one expects **ἄφειτος*) so that the connecting link between the two cannot be established. With regard to the root for 'red' **Aérw* (Sk. *arunas*, Gr. ἔρυθρος) and **Ạrew* (Sk. *rohitas*, *ravis* 'sun,' Lat. *ruber*, Gr. ἔρυθρός), the Greek forms seem to have been interchanged by Austin; each should go with the opposite base. But it should be noticed that the precise connexion of these forms cannot be indicated, and it is much more reasonable to assume true prothesis before the *r*, especially since ἔρυθρός, ἔρευθος can then be explained as ablaut variations. Finally, for the root meaning 'cloud' *[?]*enbh* (Sk. *ambhas*, Arm. *am̐*, Gr. ἀφρός) and *[?]*̣nebh* (Sk. *nabhas*, Lat. *nebula*, Hitt. *nepis*, Hom. Gr. δὲ νέφος), the mere fact that stereotyped phrases like χρυσεόισι νέφεσσιν (N 523) do not show the lengthening is significant, for such phrases are very old. We prefer to believe that the prothetic vowel was here lost rather than to assume, on theoretical grounds, the existence of long voiceless nasals in Greek due to the highly theoretical existence of the second laryngeal in initial position.¹⁵

Austin then proceeds to list all the Greek words with prothesis which seem to him to contain a laryngeal. This is presumably for convenience since in nearly all the cases (except those he has already listed) he cannot specify which laryngeal is involved, nor set up the two themes. Since he does not believe the color of the prothesis significant, the list is really no different from that of the conventional authorities.

¹³ This etymology for *alpas* is rejected by Couvreur, *Hett. H.*, pp. 149–50.

¹⁴ Unless it were the famous white *panache* of Henri Quatre!

¹⁵ Through a slip, Austin calls it (*ibid.* p. 91) the fourth (voiced) laryngeal.

A further argument of Austin's involves the assumption of a long voiceless phoneme **hw* in "Indo-Hittite" on the basis of prothesis alternating with spiritus asper. The only example of any importance here is ἄημι 'blow,' Sk. *vāti* with an actual Hittite cognate *hwantas* 'wind,' but Gr. αἶνω 'scatter by the wind' (ἀνέω and ἀνέω also occur). The fallacy of the entire argument is the implicit assumption that the Greek rough breathing can represent a laryngeal, which is untrue: few will believe that an entirely new IE phoneme need be assumed to explain a few doubtful examples in one language, especially since its phonetic nature is not clear and there is no reason (in fact, the contrary) why such a combination should be more stable and have other properties than its constituent phonemes. The argument from breathings is in any case untrustworthy, since dialectal elements are involved — the well-known psilosis of Ionic and the extension of rough breathing in Attic; besides, the testimony of our texts (breathings are not fully marked until the ninth or tenth century) is uncertain in this matter. That Homeric prothesis before *ϕ*, like the Epic "Zerdehnung," was far extended for metrical purposes does not appear unlikely.

The thesis of Austin with regard to Homeric lengthenings¹⁶ may be dealt with in the same manner as our discussion of Kuryłowicz's Vedic lengthenings. One may notice that in La Roche there are some twenty-one categories of lengthening before *r*, thirteen before *l*, ten before *m*, seven before *n*, and it is our contention that these statistics are not unimportant. In almost all the cases, a missing *ϕ* or *σ* offers the explanation: in the case of νέφος the connexion with δρόφος and κνέφος may lie at hand, or the prothesis may have been lost; we do not admit the proposed etymology of λόφος, though the form used by Aristarchus, ἄλοφον K 258 (cf. καταλοφάδεια K 169), suggests that the prothetic vowel, if such there was here, was lost. There seems to us, as in the Vedic material, too little certainty here. It should be understood that our arguments are directed against Austin's contention, not against the theory of prothesis. We think that it is nonsense to explain cases in which Greek unaccountably does not show the prothetic vowel by assuming, again on the basis of a single lan-

¹⁶ Taken from La Roche, *Homerische Untersuchungen*, Leipzig (1869), pp. 49 ff.

guage and a few uses, a "long voiceless nasal" derived from the "velar glottal stop" (?). We think, further, that we have sufficiently disproved his two main examples. The reader may, if he is curious, find many cases in Homer in which no lengthening is found and, vice versa, cases of lengthening in which no "long voiceless sonant" can possibly be assumed. We may say, in passing, that there is no need to assume the existence of voiceless μ and ν at all (nor probably of λ) on the basis of slight and dubious inscriptional evidence, viz. Att. $\mu\eta\epsilon\gamma\acute{\alpha}\lambda\omicron$.¹⁷ We would much rather assume that Greek has lost the prothesis in a good many cases (hence $\nu\acute{\epsilon}\kappa\upsilon\varsigma$, $\nu\acute{\epsilon}\kappa\tau\alpha\rho$) but has generalized it before r .¹⁸ This seems to us more in accordance with the evidence and dispenses us from manufacturing out of the whole cloth three new IE phonemes. Austin's argument is typical of much discussion on this matter in that it attempts to explain too much in a schematic way, and by riding a theory, overlooks the natural particularities of a given language: the laryngeal is not ubiquitous and Occam's famous principle "entia non multiplicanda" most certainly applies to the IE phonemes.

To round off this discussion we may mention the rather neat argument of Kuryłowicz with reference to the so-called "Attic reduplication."¹⁹ Thus such forms as $\epsilon\acute{\nu}\eta\nu\omicron\theta\epsilon$, $\epsilon\lambda\acute{\eta}\lambda\omicron\upsilon\theta\alpha$, $\epsilon\acute{\nu}\eta\nu\omicron\chi\alpha$ (fourth century) are explained as if $*\mathfrak{z}_1ne-\mathfrak{z}_1nodhe$, $*\mathfrak{z}_1le-\mathfrak{z}_1loudha$, $*\mathfrak{z}_1ne-\mathfrak{z}_1noka$ with \bar{e} from $e+\mathfrak{z}$ before consonant (the formula which we have discussed above). This is really reduplication of a consonant group like Sk. $susv\acute{a}pa$, $tity\acute{a}ya$, the Attic type appearing in $\nu\acute{\alpha}\nu\alpha\varsigma\acute{\alpha}\nu\acute{\alpha}$ - from $*aus/\mathfrak{z}es$ ($*\mathfrak{z}_2eus/\mathfrak{z}_2ues$). The zero grade has been generalized in $\epsilon\rho\acute{\eta}\rho\iota\pi\alpha$, $\omicron\rho\acute{\omega}\rho\nu\gamma\mu\alpha\iota$ (Herodotus), $\epsilon\rho\acute{\eta}\rho\iota\gamma\mu\alpha\iota$ (Hippocrates), $\acute{\alpha}\lambda\acute{\eta}\lambda\iota\phi\alpha$ (fourth century); e -grade in $\omicron\rho\omega\rho\acute{\epsilon}\chi\alpha\tau\alpha\iota$, $\epsilon\lambda\acute{\eta}\lambda\epsilon\gamma\mu\alpha\iota$ (Plato). In $\acute{\alpha}\lambda\acute{\eta}\lambda\iota\phi\alpha$ and $\acute{\alpha}\rho\acute{\eta}\rho\alpha\kappa\tau\alpha\iota$, η is from \bar{a} ($e+\mathfrak{z}_2$) while $\omicron\rho\acute{\omega}\rho\nu\gamma\mu\alpha\iota$ and $\omicron\rho\omega\rho\acute{\epsilon}\chi\alpha\tau\alpha\iota$ show \bar{o} ($e+\mathfrak{z}_3$). This phenomenon therefore is assumed to begin in verbs with ini-

¹⁷ Sturtevant, *Pron. of Gr. and Lat.*, pp. 63-4 where some of the examples merely indicate a writing for initial h .

¹⁸ So Kuryłowicz in *Eos* XXX 206-10 (1927) à propos of $\nu\acute{\epsilon}\phi\omicron\varsigma$; he does not think the Homeric lengthening is Indo-European, agreeably with our view expounded above, but rather surprisingly in the light of his similar argument from Vedic. Remember that Kuryłowicz officially endorses three laryngeals.

¹⁹ *Ibid.*

tial *a*. Kuryłowicz carefully distinguishes another more recent series where the roots do not show ablaut or weakening and, in short, the lengthening is analogical rather than phonetic, although sonants are also involved as in the first group: ἀρήρομαι, ἐλήλαμαι, ὄλωλα, ὀμώμοκα (Euripides); ἀλήλε(σ)μαι (Herodotus), ἀρήρεκα (Hellenistic). So also for the type in an occlusive, as ἀγγέρατο, ἀκήκοα (Aeschylus), ἀκηκόειν (Herodotus), and the monosyllabic type ὄπωπα, ἔδηδα as well as types without lengthening, as ἀλάλυκτο, ἀκάχημαι. With these reservations, Kuryłowicz believes that all archaic perfects of this type testify to an original laryngeal and would be found in verbs with prothesis, though there is unfortunately no perfect for ἀλέγω, ἀλέξω and the rest. In our opinion, the way in which Kuryłowicz has delimited his material has disarmed any criticism we might raise here, except to point out that one might desire further light on the question why the sonants alone should be involved in these cases of prothesis and "Attic reduplication"; and one would be more nearly convinced if the two phenomena could be tied together in a good example, rather than remaining a logical abstraction.

The precise mechanism of these forms with prothesis is not quite clear in Kuryłowicz. He seems to assume that before a word beginning in *ǵ*, the final vowel of a preceding word was lengthened with loss of *ǵ*. If the final of the preceding word was a consonant, then apparently *ǵ* is vocalized in Greek, this being a special case of his general rule that interconsonantal *ǵ* falls without trace except in Greek (*dadma-* but *δίδομεν*). However, in his latest work, Kuryłowicz tries at all costs to avoid speaking of a vocalization of *ǵ*: he prefers to think of the process as a sort of anaptyxis²⁰ although he says elsewhere that he no longer conceives of the reduction of *ǵ* as an anaptyxis.²¹ Then how is it to be conceived? Kuryłowicz's final statement leaves room for doubt: "En grec (et en arménien) le *ǵ* (consonantique) entre consonnes a peut-être modifié la prononciation de la consonne suivante, surtout celle d'une sonante, en tout cas le résultat définitif est le développement d'une voyelle secondaire entre les deux éléments consonantiques. Le rapport de l'ind. *dattá*

²⁰ *Études*, 43¹.

²¹ *Études*, p. 28.

au grec *δίδοτε* est le même que le rapport de l'ind. *nāram* au grec *ἀνέρα*." ²² This seems to be nearly a vocalization of *ǵ*, despite Kurylowicz's denial.

The series of objections launched by Couvreur against the entire doctrine of the prothetic vowel ²³ strike us as carping. Couvreur undertakes to prove that the initial vowel of *ἐέρση* (Sk. *varṣá-*) or *ἄεσα* (Sk. *vasati*) is a part of the root; that e.g. primitive IE **eu-er* under the stress accent gave the two normal grades **uers-* and **eurs*, and that the Greek form is a blend of the two, aided by the "easier pronunciation" of *ἐφερσ-* than of **eurs*. This assumption seems to us to involve at least as problematic a theory of the IE root as that of Benveniste, with the additional defect of being struck off *ad hoc* and not generalized. The phonetic argument is valueless. It is clear that not all the examples adduced as proof here for the prothetic vowel are to be so explained, and we believe that this part of the laryngeal argument can easily be reconciled with Couvreur's theory. Our own conclusion is rather to accept the theory of Benveniste with reservations. There is, thus, no proof that all *roots* beginning in a vowel had an initial laryngeal (a point underlined by Pedersen) ²⁴ as is assumed for the sake of the theory: the implication behind this assumption must be that early Indo-European had only "fester Einsatz" (*attaque dure*) which seems an over-daring and in fact erroneous conception. We shall take up this matter elsewhere.

In making up our mind concerning this part of the argument, we must bear in mind that a certain type of Greek prothesis is undoubtedly recent and occurs before certain consonant clusters (like Fr. *esprit*, *école* from Lat. *spiritus*, *schola*); *ἵκτις κτίς* (Hesych.), *ἐχθές/χθές*; sometimes before occlusive and sonant, *ὄφρῶς*/ Sk. *bhruḥ*; *ὄβριμος/βριμός μέγας* (Hesych.). But to use these examples, as Meillet ²⁵

²² *Ibid.*, pp. 42-3. The Hittite *innara-* which Couvreur cites to prove that this word had no prothesis (*Hett. H.*, p. 310) may be discounted since we do not really know its meaning: cf. Sturtevant and Bechtel, *A Hittite Chrestomathy*, p. 118 (commentary on the Ritual of Anniwiyani).

²³ *Hett. H.*, pp. 309-14.

²⁴ *Hitt.*, p. 188².

²⁵ *BSL* XXVII, 129-35 (1926). He sees prothesis in Greek non-reduplicated perfects of the *ἐγνώκα*, *ἐκτημαι* type.

did, to build up an entire theory of the prothetic vowel, is a procedure rendered obsolete by the laryngeal hypothesis.

Let us summarize the results of this portion of the argument. It is our opinion that while Greek prothesis is in part a phonetic innovation designed for easier syllabification (Meillet, as above), and is in isolated cases due to disguised or apparent prefixes (*ὄπατρος*; *ἀ-δελφός*; *ἀκούω*; and a few cases of the Hattic *a-* noted above), and, further, has been generalized everywhere before *r* as the result of a wide-spread Mediterranean substratum, enough evidence has been brought forward by Benveniste and Kuryłowicz (the latter's examples of 'Attic reduplication' in particular) to prove that the laryngeal hypothesis in some form must be invoked to explain certain not infrequent varieties of prothesis. That Hittite cognates in *h-* are not available (except for *hwantas:ventus*, *ἄ-ημι*, an excellent example, though not to be used as Austin does) is regrettable, but there is every reason to believe they will be forthcoming; note that Hittite properly does not show *h-* for roots beginning in the glottal stop. We have set the material in the framework of Benveniste's theory of the IE root, although the latter is to a large extent independent, and we are not insisting upon it here. We accept Kuryłowicz's sandhi-law to account for the *conditions* originally underlying the prothetic vowel. On the other hand, we find the manner of the process unsatisfactory as Kuryłowicz defines it; we are still less satisfied with the system offered by Austin and Sturtevant with reduced vowels and invented phonemes. However, these last authorities seem to us right in maintaining (against Benveniste) that the color of Greek prothesis is secondary, that the original vowel was *ā-* (< *ə*) with subsequent affection. Our reasons will be set forth presently as a part of the general picture of the reduction of the laryngeals, and it will be seen that we shall follow the method of Cuvreur with modifications. One conclusion to be derived from Greek prothesis, if this is, as we think, a vocalization of *ə*, is to modify the theory of Sturtevant,²⁶ that in combination with a sonant, *ə* is less likely to be vocalized than the sonant (**strAtós* > **strAtós* > IE **stītós* > Lat. *strūtus*) which

²⁶ *Lang.* 17.181-188 (1941). The example is taken from Cuny's article in *Revue de phonétique*, 2.101-132 (1912), but pushed back to 'Indo-Hittite.'

vocalizes while ə falls. But note that in these most convincing cases of prothesis due to a laryngeal, which are invariably before $r\ l\ m\ n\ \text{u}$, whereas the sonant or semi-vowel remains, the *schwa* is vocalized. It lies beyond our power to explain why these particular sounds should necessarily enter into these cases, except in so far as they are able to act also as vowels, but that they alone do so is a fact which has not been sufficiently stressed. We think we have discredited the excessive theorizing of Austin in his discussion of the Homeric lengthenings before a 'voiceless long sonant' due to the combination of a 'glottal stop of velar color' (concerning whose existence we have the greatest doubts) and his 'new phoneme' due to the combination of laryngeal + u . This last is to be kept in mind for the following chapter.

VII. ERRONEOUS EXTENSIONS OF THE LARYNGEAL THEORY

We have thus far discussed the evidence for lost laryngeals as presented in evidence which seemed wholly or in part trustworthy. Under this heading we propose to refute some extensions of the theory to unwarranted conclusions. It was natural in the first fine enthusiasm for the laryngeal that the lost consonants should be sought (and therefore found) in the most impossible places by investigators who had forgotten that "Indo-European" is substantially the concordances of the various IE languages: the evidence of any one language is automatically suspect if it presents a wide variation, for the chances that this variation is an archaism¹ are slight. We believe in particular that two arguments for traces of a laryngeal in the Greek aspirated and $-\kappa a$ perfects, as advanced by Sturtevant, and the argument for traces of a laryngeal in the so-called "Verschärfung" of Germanic put forward by Henry L. Smith, Jr., are *a priori* unlikely since each of these phenomena is confined to a single language and can easily be explained on the basis of an innovation in the language under consideration. The first of these arguments has been thoroughly disproved by R. G. Kent; we think that we can easily refute the last two and strengthen the refutation of the first.

In his article, *The Greek Aspirated Perfect*,² Sturtevant pointed

¹ Here we are not speaking of Hittite, Tocharian or the like, but of the Greek and Germanic of which it will be a question in the discussions to follow.

² *Lang.* 16.179-182 (1940).

out that in Homer this type of perfect was confined to the third person middle in -αται or -ατο (τετράφαται), the active forms (πέπομφα) being post-Homeric and mostly Attic. But the Greek third plural endings are taken over from the aorist: the true perfect had an ending cognate with Hittite pret. -er, Sk. perfect -ur (Av.-arə), Sk. perf. mid. -ire, Lat. -ēre, and Toch. -r(e). These forms imply the ablaut variants: *ēr (Lat. and Hitt.) /*_{Br}/*r (-ur, -arə); but since -ēr, "if not the lengthened grade," represents *e'r, then -ur is from *_{Br} < *'Br; this last is to be assumed, says Sturtevant, since *_B'r > IE *ər > Sk. -ir. May we at this point indicate that Sturtevant is at least consistent with himself,³ but has not given sufficient reason for adopting a theory diametrically opposed to that of Kuryłowicz? It is precisely *'Br which should give Sk. -ir (Kuryłowicz) while *_B'r should give r in this position. The real reason for assuming *'Br is to fit the hypothesis of Sturtevant that in the perfect third plural a primitive Greek *tetṛp-_{Br} could give an aspirated *tetṛph_{Br} whence, with substitution of present ending, τετράφαται. Now may we point out two further objections: (1) It is extremely unlikely that the ending responsible for such sweeping changes should utterly disappear everywhere throughout the Greek-speaking world without a trace. (2) There is, as we indicate elsewhere, no evidence of any consequence to prove that voiceless aspirates were formed anywhere outside of Indo-Iranian. It is at least surprising that the same aspiration is not seen in the Indo-Iranian perfect. Sturtevant must call upon the analogy of non-aspirated forms (or assume another form of ending, *_{Br}). But would there not be a trace of the aspiration in the oldest Vedic texts? Besides which, Kuryłowicz seems very soundly to have established that the Indo-Iranian voiceless aspirates come into being when a voiceless stop comes before the *zero grade of a laryngeal before a vowel*. There is no way of telling what happens in this situation before a reduced vowel, if such there be, and this is a further theoretical objection. It is thus more than a little unlikely, even if this ending had existed in Greek, that it would have caused aspiration.

Sturtevant goes on to assume that since the perfect was originally

³ Lang. 12.143 (1936). ə from ɓ before laryngeal between consonants, but the point is not elaborated at all.

indifferent as to voice, a part was played also by an original aspiration in the first person act., cf. Hitt. *hhi* < 'Indo-Hitt.' *-*xa*: *πέπομφα* from **pepom̥p-xa*. A single Iranian form Av. *hušvafa* 'has slept' beside *svap-* is adduced as further proof, and Sturtevant goes on to assume that the aspiration spread from first sing. and third plural, while such forms as Homeric *κέκοπα* have *π* from the third sing., and Indo-Iranian generalized the unaspirated form. To which one might reply that it is yet to be proved that the laryngeal could produce a voiceless aspirate in Greek and, as we stated in our first chapter, the identification of the Hittite *-hi* conjugation with the IE perfect is not acceptable to all authorities.

In a sane article, *The Greek Aspirated Perfect*,⁴ R. G. Kent offered a thorough refutation of Sturtevant on the basis of the Greek forms themselves and their late and exclusively Greek development.⁵ The perfect active of these verbs in Homer had non-aspirated stops (21 in Homer, 6 in first person singular) and was intransitive; the aspirated forms were later and transitive. The aspiration comes from the sandhi of palatal and labial themes before *θ* and is significantly not to be found in the dental stems (which usually changed analogically to *σ*). There is also aspiration before *σ* of the aorist and future, as attested by old Attic *χσ* and *φσ* for *ξ* and *ψ*. The fact that the aspirated third person plural medio-passives stood in close relation to the *θ*-endings (also medio-passive) explains their occurrence in Homer earlier than aspirated active forms.

Some of the same arguments are repeated in Sturtevant's article, *The Greek κ-perfect and Indo-European -k(o)-*.⁶ Pointing to some Tocharian preterites: *tākā* 'I was' (cf. *εστηκα* and the semantic change of Sp. *estar*);⁷ *kälk* 'he went,' cf. *carati*, *πέλω*; *kāk* 'called,' cf. Sk. *gāti* 'sings'; *pälke* 'saw' (mid., cf. **bhel-* 'shine'), Sturtevant remarks that some of these, most of the Homeric perfects in *-κα*, the three Greek aorists in *-κα*, and Latin *fēcī* and *iēcī*, are from roots in a long vowel in the normal grade. Assuming that the perfect had a preterite use, he explains the Greek aorists as unreduplicated perfects. That

⁴ *Lang.*, 17.189-193 (1941).

⁵ As an Iranian specialist, Kent easily disposes of Av. *hušvafa*.

⁶ *Lang.* 16.273-284 (1940).

⁷ A better parallel would be Ir. *tā* 'is.'

the distinction between the aorist and perfect is as inconsequential as Sturtevant assumes is another question. Acting on a suggestion of Sapir, he then suggests that *-ka* originated in the combination of final laryngeal with the ending of the perfect *-xa* (Hitt. *-hhi*, Greek *-a*). Once more we must say that the Hittite *hi*-verb seems to have at least as much connexion with the thematic present as with the perfect. More precisely, he tells us that an 'Indo-Hittite' **sta'xa* gave a pre-IE **sta'qxa > IE*stāka* (Toch. *tākā*, Gr. *ἔστηκα*), while *θήκα* and *fēci* go back to **dhe'xa > *dhe'qxa*. In other words, a post-velar *k* (*q*) develops between laryngeals as a "glide sound;" note that Sturtevant does not really mean a glide sound, which is phonetically "a necessary intermediate sound between two regular speech-sounds."⁸ But this is in no sense a description of the Arabic (and Hebrew) *qaf* which is a pharyngeal and not intermediate between laryngeal occlusive and laryngeal spirant. Notice further that the formula **sta'qxa* is a phonetic formula incapable of being pronounced. The so-called 'glide sound' *q* is, as far as we know, not found except before vowels. Its function is clearly not epenthetic (*ἀμ(β)ροσία*, *ἀν(δ)ρός*), for it does not lead to ease of pronunciation — in fact, the contrary. Sturtevant makes not the slightest effort to explain (1) why a phoneme not elsewhere attested in Greek should be invented *ad hoc* to explain one ending of Greek, (2) why *q*, which is in Semitic a very stable sound, unlike the laryngeals, if ever present in Greek disappeared without trace, and (3) how and under what conditions *q* could have developed to Greek *k*. It seems to us that Sturtevant's formula becomes ridiculous the moment we ask ourselves the meaning of the symbols employed by him.

An argument which seems to us to lack even a shred of plausibility was advanced by Henry Lee Smith, Jr. to explain the doubling of intervocalic *i* and *u* after a preceding short vowel in Germanic under conditions which have never been thoroughly understood.⁹ As is known, *ii*, *uu* form a diphthong with a preceding short vowel in West Germanic while Norse and Gothic turn *ii* into *ggj* and *ddj* respectively; the combination *uu* appears as *ggw* in both Norse and Gothic.

⁸ G. Noël-Armfield, *General Phonetics*, p. 61.

⁹ *Lang.* 17.93-8 (1941). Cf. Prokosch, *A Comp. Germ. Grammar*, p. 92.

As the phenomenon cannot be accounted for on the basis of IE accent, Brugmann (*Grundriss*² I, p. 283) assumed that every \dot{i} and \dot{u} was doubled intervocalically. Smith believes that a laryngeal uniting with \dot{i} and \dot{u} had produced the new phonemes $*hj$ and $*hw$ described as 'long voiceless semivowels.' Under Verner's law, these sounds gave Prim. Germanic yj and yw ,¹⁰ which were variously developed. In West Germanic, the y was assimilated to the following semivowel, and the first element of the new combination was vocalized. Norse and Gothic showed the development $yw > gw$ (written *ggw*, *ggv*) while $yj > gj$ (written *ggj* in Norse) with subsequent development in Gothic to *ddj*, this being erroneously called "a palatal stop followed by a spirantic glide like *-gy-* in *Magyar*." Smith suggests as less attractive the hypothesis that yj , yw became everywhere *jj* and *ww* with various treatments. He then gives a list of selected examples of which one may say chiefly that they present no evidence for the existence of a laryngeal except an IE long vowel and sometimes not that: why, for example, has one the right to reconstruct $*ei/i$ as 'Indo-Hittite,' $*iAi$ ¹¹ $>$ IE $*ihj >$ Germanic $iyj- >$ Goth. *iddja* 'went'?

We may preface our discussion by observing that Smith really does not need his laryngeals to explain the true problem (under what conditions \dot{i} or \dot{u} is doubled), since he leaves this to the IE accent. The laryngeals are invoked, in fact, only to explain a specific phenomenon of Norse and Gothic which may easily be accounted for on more general terms. In other words, Smith's hypothesis is, as we shall see, an unnecessary one. Let us note: (1) If the phenomena can be explained simply on other grounds, there is no advantage in assuming two new IE phonemes and postulating a special development for them in Germanic. How can we be sure that, even if they existed, the development under Verner's law would be as stipulated? And would there not be a trace of these consonants initially, where their nature could not be misunderstood? (2) As a matter of fact, \dot{i} and \dot{u} may at any time be written double, since we have to do with the glide sound which in many languages (e.g. Umbrian) is actually written. Far from being irregular, the glide, written or not, is always

¹⁰ y is a voiced velar spirant.

¹¹ At best this would be $*Ai-$ or $*Abi-$: what is Smith's laryngeal doing here?

present. Whether the rules which apply when this glide becomes phonematic can be given is another matter: in Latin, there is alternation, for example, in *ēius*, but it is the glide (*eiūs*), as the grammarians tell us, which maintains the length of the syllable (*ēi-*), and there is no question of a laryngeal here, although the situation is identical. We even know that Cicero and Caesar believed in the double writing of intervocalic *i̇*¹² in such words as *aiio*, *Maiia*, *Aiias*; Priscian (2.14.5-14 K) tells us quite expressly "antiqui solebant geminare eandem *i* litteram et *maiūs*, *peiūs*, *eiūs* scribere." So the doubling itself is a normal phonetic procedure. (3) There remains then, only to show that *i̇* and *u* can develop as in Norse and Gothic. The phenomena in question are well-known, and no attempt is here made to be comprehensive. Note first that Germanic *w* > *gw* in Vulgar Latin: *wardan* > It. *guardare*.¹³ We find the same process in Welsh where one may compare, for example, the cognates *gwynt*/*ventus*; *gwir*/*vērus*; *gwyn* 'white'/Ir. *find*, *Vindo-bona*, Gr. *ινδάλλομαι*; medially, the same treatment must be assumed.¹⁴ As might have been expected, Welsh shows a parallel treatment of *i̇* under certain conditions medially, the final result being *-dd-* (pron. *ð*) as in *newydd*: Gr. *véos*, Lat. *novus*, Goth. *niujis*; or *trydydd*: Lat. *tertius*, Goth. *þridja*, Sk. *tr̥tīya-s*. The process here has of course taken a particular development, but it shows unmistakably that a consonantal element developed before the *i̇*. The same process can be duplicated very easily in the development of the Romance languages, where Vulgar Latin *i̇* from whatever source very commonly develops a consonantal element: *peiórem* > It. *peggiore*: in the Tuscan dialect we have an exact parallel to Gothic, for *ia*, *io* here give *dja*, *djo* (*iacet* > *diace*), a phenomenon which may be seen also in Raeto-Romance.¹⁵ (4) Smith's account of the relation between Gothic *ddj* and Norse *ggy* is inexact. The sounds are so close (they are confused in Vulgar Latin) as to render unnecessary the development posed by Smith: there is no reason why the development may

¹² Sturtevant, *Pronunciation of Gr. and Lat.*, pp. 145-7.

¹³ Grandgent, *From Latin to Italian*, p. 67.

¹⁴ Lewis and Pedersen, *A Concise Comp. Celt. Gram.*, p. 11.

¹⁵ Meyer-Lübke, *Gram. der Romanischen Spr.*, I, pp. 329-330.

not have been independent. Magyar -gy- is a palatal plosive of special type which need not be assumed here; it seems to be phonematic, aside from Hungarian, only in certain Indian dialects.¹⁶ If assumed, however, it must be assumed for both Gothic and Norse, which militates against Smith's theory of Gothic innovation. In conclusion, we believe to have established beyond a doubt that no laryngeal is responsible for the Greek aspirated and -κα perfects, or for the Germanic "Verschärfung." The general principle which we have adopted throughout is that evidence for a laryngeal must rest on the testimony of more than one language; or that at least (in the case of Hittite) we must be absolutely certain that the phenomena under consideration cannot be explained on another basis more simply, as the result of some particularity of the language itself. It is for this reason that in the course of our exposition we have given particular weight to certain arguments (Indo-Iranian voiceless aspirates, prothesis of Greek and Armenian) at the expense of others less convincing (lengthened Vedic vowels).

VIII. THE HITTITE EVIDENCE

Having now passed in review and discussed the evidence justifying the laryngeal hypothesis, we come next to treat in detail the contributions of Hittite, a subject which has by reason of its importance to be treated last. In our first chapter we presented only so much of the Hittite background as seemed properly introductory: the reader will remember the main points presented there — that the Hittite *h* is a sound of independent origin not derived from an IE phoneme or phonemes, nor borrowed into Hittite, nor originating in Hittite itself as a glide. We also mentioned the double and single writing of *h* in Hittite texts. In this chapter we mean to present and criticize in some detail the best examples which come to hand of Hittite *h* and Hittite vocalism. We shall also treat of the *ó* (fundamental *o*) question and related matters.

Let us begin with the examples noted by Kuryłowicz,¹ which may

¹⁶ Noël-Armfield, *General Phonetics*, p. 106. It is denoted phonetically as ʃ.

¹ *Études*, pp. 73-5. We write Hitt. *s* without diacritical mark, since there is no modification in its sound.

serve as a *corpus vile*. (1) *h* after a vowel: (a) *pahs-* 'watch', IE **pā/pō* 'watch,' 'feed' (both meanings in Serbo-Croat. *hrániti*, as Kuryłowicz notes, but the IE roots may well be distinct) in Lat. *pasco*, *pābulum*, Gr. *παῦ*, Sk. *pāti*. Couvreur² correctly points out that the *s*-formant of Hittite is better paralleled by Ch. Slav. *pasq* 'pasture' than by the *-sk-* in Lat. *pasco*. Pedersen³ finds this word an exception to his rule that **eH₂* gives Hitt. *ā*, but can only explain it as analogical. It should be noticed that the *h* of this word is usually doubled in the spelling: *pa-ah-ha-as-ta*. (b) *mahlas* 'apple,' cf. Gr. *μῆλον* > *mālum*, another exception to Pedersen's rule,⁴ and explained therefore as a foreign word. It now appears, however, that the Hittite word means 'vine-branch,' as fully proved by Ehelolf,⁵ and must be dismissed. (c) *pahhuen-* 'fire,' cf. Goth. *fōn* < **pāun*; genitive *fun-ins* < **pāun-*. The example is excellent, but the precise reconstruction of the IE base is difficult. The Hittite nominative *pa-ah-hu-wa-ar* (beside *pa-ha-hu-ur*) is assumed to be secondary by Pedersen⁶ who reconstructs **peH₁ur* and assumes vowel harmony (*e* > *a*) in the Hittite form; in the reduced grades he has no explanation how **pH₁un-* turns up instead of **pun-* agreeably with his theory. It seems clear at any rate that the IE base **peuā-*, assumed by Boisacq, s.v. *πῦρ*, in order to connect this word with Lat. *pūrus* and Sk. *pāvakā-*, must be abandoned. Couvreur⁷ arrives at the same **pāun-* assumed by Kuryłowicz and suggests that Gr. *παῖς* 'torch' is thereby completely explained. The Greek *πῦρ* is a real difficulty: since the *r/n* variation of this word is attested, we must assume that the *r* was generalized (so in Arm. *hur*, Umb. *pir*, Toch. *por*), and that the vowel-length is not original. Couvreur is of the opinion that the Hittite forms show a reduced instead of the expected vanishing grade: **p_hhūnōs* > **pahhunas*, cf. dative *pa-ah-hu-ni* (the genitive

² *Hett. H.*, pp. 184-5.

³ *Hitt. und die and. i.e. Spr.*, p. 187.

⁴ *Ibid.*

⁵ *Orientalistische Literaturzeitung*, Leipzig, XXXVI, 5.

⁶ *Hitt. und die and. i.e. Spr.*, pp. 187-8.

⁷ *Hett. H.*, pp. 185-8.

pahhuwenas is formed on the analogy of other *r/n* stems as Benveniste notes).⁸

(2) *h* after consonant. (a) *palhis* 'wide,' IE **pel*₂- **plā*, in Lat. *plānus*, Lith. *pilnas*, Gall. *Medio-lānum*. This word is one of Pedersen's examples⁹ to prove that the laryngeal *H* which usually is combined with a preceding consonant, appears as *h* after *s*, *r* and *l*. Sturtevant¹⁰ connects the word specifically with Greek *πλατύς*, Av. *paraθu-*, Sk. *pr̥thú-* which he derives from IE **pl̥*. Couvreur¹¹ sides rather with Kuryłowicz, but seems to posit a **pl̥ə*; his objection to Benveniste's¹² double theme *pel*₂/*ple*₂ being of course the vocalism of the Hittite word, since IE *e* gives Hitt. *e/i*. (b) *sanh-* 'seek,' IE **sen*₂, Sk. *sanóti*, participle *sātá-* 'acquire,' Gr. *ἄνμαι* and *ἀναμαι*. This etymology seems to be generally accepted. Whether Sturtevant is correct¹³ in separating this word from an identical stem meaning 'cleanse' is disputed; Ehelolf identifies the two.¹⁴ Sturtevant no longer sees the *-h* of these verbs as a formant and believes such forms as in *sa-an-ah-zi* were dissyllabic, though Pedersen, taking the spelling *sa-an-ha-zi*, thinks them trisyllabic.¹⁵ This question is, of course, vital for Hittite vocalism. (c) *parh-* 'drive' IE **per* and **per*₂, cf. Greek *περάω* and *πέρνημι*. (Kuryłowicz has mistranslated Sturtevant's English 'drive' as 'aller en voiture.') Couvreur rejects this etymology on semantic grounds but fares no better.¹⁶ Pedersen¹⁷ reads the word *barh-* and compares Gr. *φέρω* in Homeric *ἄελλαι . . . φέρονσι* (Il. 19.378). It seems to us that this etymology offers no explanation for the *h*, and doubtless the word must remain obscure. (d) *ishiiā-* 'bind' with prothesis before a consonant cluster, IE **se*₂*i*, **s*₂*e**i*, Sk. *s(i)yāti*, Old High German *seita* 'rope,' Lat. *saeta*, Gr. *ἵμάς*. Couv-

⁸ *Origines*, I, p. 37.

⁹ *Hitt. und die and. i.e. Spr.*, p. 184.

¹⁰ *C. Gr.*, p. 106.

¹¹ *Hett. H.*, pp. 215-17.

¹² *Origines*, I, p. 151.

¹³ *C. Gr.*, p. 243.

¹⁴ *Kleinasiatische Forschungen*, I Weimar, 1930.

¹⁵ *Lang.*, 17.181-188 (1941).

¹⁶ *Hett. H.*, p. 218¹.

¹⁷ *Hitt. und die and. i.e. Spr.*, p. 185.

reur points to a corresponding Luwian form with initial *h*: *hi-is-hi-ya-an-ti*, claims that this is older, and regards the two as non-Indo-European;¹⁸ but Pedersen sees a Hittite alternation *sē/ish* and, while not explaining the Luwian form, remarks in despair that it is too early to reduce the Hitt. *h* to rule. Since the meaning is so close to the IE words, we are inclined to Pedersen's view.

(3) *h* initially. (a) *harkis* 'white,' Sk. *árjuna-*, Gr. ἀργός, ἄργυρος, Lat. *argentum*. Couvreur¹⁹ cites further Toch. A *ārki*, B *arkwi*, *arkyant* 'silver,' 'white,' Gr. *i*-stem in ἀργι-κέραννος. (b) *hanti-* 'in front of,' *hantezzis* 'first,' cf. Sk. *anti*, Gr. ἀντί, Lat. *ante*, *anterior*. This is one of the most convincing examples, and it is interesting to note how necessary it is to establish the sound laws before etymologizing: even Pedersen was comparing *hantezzis* and Welsh *cynfaf* in 1925.²⁰ (c) *hannas* 'grandmother,' cf. Lat. *anus*, Old High German *ana* 'grandmother,' Gr. ἀννίς·μητρὸς ἡ πατρὸς μήτηρ (Hesych.), Arm. *han* 'grandmother.' We have mentioned Sturtevant's suggestion²¹ that Hittite *annas* 'mother' has lost its *h-*, after the analogy of *attas* 'father.' But the word may well be a nursery-word and not subject to linguistic rules.²² (d) *huhhas* 'grandfather,' IE **ǵ₂euǵ₂os* > **avos* in Latin *avus*, Old Ice. *afe*; the Hitt. form shows weak grade **ǵ₂uǵ₂os*. Unfortunately this word is subject to the same objections as the last and is quite uncertain.²³ (e) *huvant-* 'wind,' IE **ǵ₂ueǵ₁* 'blow' and **ǵ₂ueǵ₁nto-* 'wind' in Gr. ἄημι, ἄελλα, Sk. *vāti*, Lat. *ventus*, Goth. *winds*. Pedersen²⁴ wished to read *hwant-*; this is confirmatory evidence for the Greek prothesis in ἄημι. (f) *huwes-* 'live,' third person singular *huiszi*, weak grade in *husk-* 'await'; cf. Sk. *vasati* 'pass the night,' Gr. *iaúō*, Hom. ἄεσα, Goth. *wisan* 'be.'²⁵ This appears sound, the prothesis of ἄεσα being so confirmed. Kuryłowicz is probably wrong to follow Sturtevant in the etymology of *husk-* which Peder-

¹⁸ *Hett. H.*, pp. 197-8; *Hitt. und die ind. i.e. Spr.*, p. 114.

¹⁹ *Hett. H.*, pp. 113-14, 314-15.

²⁰ *Grouperment des dialectes i.e.*, p. 42 (1925).

²¹ *Lang.* 15.153 (1939).

²² Cf. Couvreur, *Hett. H.*, p. 49.

²³ Cf. Couvreur, *op. cit.*, p. 65, p. 109.

²⁴ *Hitt. und die ind. i.e. Spr.*, pp. 8, 184

²⁵ So Sturtevant, *C. Gr.*, pp. 89, 54.

sen²⁶ connects with *avēre*, *avidus*. Neither etymology for *husk*- satisfies Couvreur.²⁷

(4) Representatives of IE *e* and *ē* (ϱ_1e and $e\varrho_1$) as (a) *es*- 'be'; cf. *eszi* (*e-es-zi*) with *ἐστί*, Lat. *est*: Hitt. *z*=*ts*. The forms of 'to be' are naturally of great importance in establishing the IE nature of Hittite. (b) *ed*- 'eat'; cf. *e-it-mi*, Sk. *admi*, Gr. *ἐδω*, Lat. *edo*. (c) *ar*- 'come' (causative *arnumi* 'I bring') IE $\ast\varrho_{er}$; in Sk. *ṛnóti*, Gr. *ἄρνωμι*, Lat. *orior*. (d) *i*- 'go,' IE $\ast\varrho_{1ei}$; cf. Hitt. imper. *it* 'go thou,' Sk. *ihi*, Gr. *ἵθι*. (e) *assus* 'good,' IE $\ast\varrho_{1es-u}$ in Gr. *ἐύς*. (f) *arras* 'anus,' IE $\ast\varrho_{1ers}$ in Old Ir. *err*, Gr. *ἄρρος*, Old High German *ars*. These last examples could be multiplied, but the main point seems sufficiently clear, namely that the Hittite cognates of IE *ē* have no *h*. Whether the *a*-color assumed by some of the Hittite forms is to be interpreted as a reduced grade or as umlaut lies outside our present discussion.

(5) On the basis of certain cases in which IE *a* is not answered by Hitt. *h*, Kuryłowicz is tempted, as we have seen, to posit ϱ_4 as Sturtevant in fact does. Note in particular: (a) neuter plural in *-a*, cf. Sk. *-ā*, Gr. *-a*. Here we must note that we have purposely not discussed examples of Hittite endings or formants in this connexion, since certainty is most hard to find. Pedersen²⁸ reconstructs an IE eH_2 which gives *a* in Indo-European everywhere. But to us, the advice of Couvreur is sound: ²⁹ the Hittite plural declension is an innovation based on the nominative plural of *i*, *u*, and *a* (*ā*, *o*) stems. The neuter plural shows *-a* in the *i* and *u* stems: *mekkaia* 'great,' *idalawa* 'bad' which must be late, for they do not show contraction; dental stems (*humanda* 'all') and some *r/n* stems (*pahkura* 'fires') likewise. Couvreur accordingly assumes a Hittite collective in *-ē* like the Latin fifth declension (cf. *udne* 'land') from which a plural in *-ə* might have been generalized. (b) Certain adverbs and prepositions: *appa* 'back, behind,' cf. Gr. *ἀπό*, Lat. *ab*; *awan* (particle indicating direction), cf. Lat. *au-*, OSl. *u-*, Sk. *dva*. Couvreur³⁰ shows

²⁶ *Murš. Sprach.*, p. 51.

²⁷ *Hett. H.*, pp. 120-22.

²⁸ *Hitt. und die ind. i.e. Spr.*, p. 183.

²⁹ *Hett. H.*, pp. 224-6.

³⁰ *Hett. H.*, pp. 94-6, 153-55.

that the first may reasonably be connected with Gr. ἐπί: cf. *appezziaz* 'later' with ὀπίσ(σ)ω, ἔπισσον· τὸ ὕστερον γινόμενον (Hesych.); the latter etymology is semantically obscure since IE *au*, *ue* indicates a movement downward, the Hittite word a movement upward. (c) Hitt. *-ta* (second person singular, med.-pass.), and Sk. *-tha*. While Couvreur's suggestion³¹ that *-ta* is IE **tho* patterned on the third person singular *-to* does not appear to us any more convincing, it is impossible to lay any weight on this very dubious etymology. (d) Hitt. *ta(i)ia-*, IE **teǵ₂i̯e/o* 'steal'; cf. Old Slav. *tajǫ*, Gr. τηράω 'deprive of,' Old Ir. *taid* = Old Slav. *tatъ* 'thief.' Pedersen³² also identifies the word with Sk. *stāyati* since it is his belief that IE *eH*₁, *eH*₂ gave *ē*, *ā* everywhere in Indo-European. Couvreur³³ attempts valiantly to escape this etymology. He cites Lat. *mustela*, analyzed as *mus-tēla* 'mouse-thief,' as authority for an IE (*s*)*tēi* from whose *o*-grade would be derived the forms mentioned above. The only difficulty, which Couvreur does not mention, is the long vowel of *mūs*, and the somewhat dubious semantic shift. But granting both, the Doric τᾱτῶμενος and therefore the other Greek words must be separated ('deprive of' ≠ 'steal'). What gives some support to his argument is the assumption that the base **stel* (English *steal* etc.) is parallel with an extension in *l* rather than in *i̯*. This, though weak, seems to us to be an attempt in the right direction, since this evidence for the fourth laryngeal seems to us pitifully weak,³⁴ and, with this single exception, not really worth discussing.

Some rather more serious evidence for a missing Hittite laryngeal is adduced by Pedersen.³⁵ He cites, besides the *-a* of the neuter plural already cited, the normal type *hurtais* 'curse,' verbs in *-ājezzi*, reflex-

³¹ *Les désinences hittites -hi, -ti, -i, etc.* in *Mélanges Franz Cumont* II, pp. 560-69.

³² *Hitt. und die and. i.e. Spr.*, p. 136.

³³ *Hett. H.*, pp. 208-9.

³⁴ It would be idle to discuss two extremely dubious etymologies proposed by Kuryłowicz in a cautious footnote (*Études*, p. 75) as "exemples moins sûrs." *Uttar-* 'word' cannot be connected with αὐδῆ, Sk. *vadati* if the primary meaning is 'thing' as Couvreur has proved (*Hett. H.*, pp. 160-66); *išijah-* 'search after' can easily go back to an *e*-vocalism: Old Sl. *iskъ* 'seek.'

³⁵ *Hitt. und die and. i.e. Spr.*, p. 183.

ions of the root **stā*, and the first two syllables of *da-ma-a-is*. Let us take these up in detail. (a) *Hurtaiš* is, according to Pedersen,³⁶ trisyllabic and therefore rests on an *ā*-stem comparable to *βροντή*+*io* suffix; while Pedersen does not accept Sturtevant's etymology³⁷ which compares Goth. *waúrd*, Lat. *verbum* on the grounds that IE **uer* is found in Hitt. *ú-e-ri-ya* 'call,' still his own connexion with Slavic *rota* 'oath,' Sk. *vratá-m* 'decision' does not explain the initial laryngeal any better. It should be noted that Meillet calls the relation of *rota* and *vratá-m* plausible, but not sure.³⁸ The two words might well go back to a base **ure-* (with ablaut variations) alternating with **uer-*. What is important, however, is the fact that Pedersen is over-eager to find *ā*-stems in Hittite, his assumption in this case being arbitrary. *Hurtaiš*, of which the etymology is completely uncertain, may perfectly well be formed on the nouns in *-oi* with *s* extended from other declensions. (b) The verbs in *-āizzi* (writing them with *ā* is really begging the question) have been discussed in our first chapter. Since Pedersen admits³⁹ that the Greek types *μισθόω* and even perhaps *φιλέω* may also be sources, it seems to us entirely reasonable to follow Couvreur⁴⁰ who connects them all with the *-óω* type. It is certainly dangerous to assume wide-spread *ā*-denominatives in a language where the *ā*-stems are conspicuously absent. (c) As for *da-ma-a-is* 'other,' which most scholars read with initial *t* (the spellings *ta-ma-a-is* and *ta-ma-is* are common), Pedersen is here⁴¹ indulging one of his favored etymologies, connecting the word with Gr. *δῆμος*, Irish *dám* 'troop' (*ā*-stem), assuming an original feminine *o*-stem. As to the semantic development proposed, 'people' may well become specialized to 'foreign people,' but Pedersen's parallels do not show how 'foreign' can become 'other' *without leaving a trace of the original meaning*. The two *ā*'s therefore rest on a highly

³⁶ *Op. cit.*, pp. 38-9.

³⁷ *C. Gr.*, p. 106.

³⁸ *Le Slave commun*, p. 116.

³⁹ *Hitt. und die and. i.e. Spr.*, pp. 136 ff.

⁴⁰ *Les dérivés verbaux hittites en -Ā(i) et -ija* in *Revue belge de philologie et d'histoire*, 17.887-894 (1938).

⁴¹ *Hitt. und die and. i.e. Spr.*, pp. 51-4.

dubious etymology. It should be observed that Pedersen himself not long before had connected the word with **duō* though admitting that the formation was not clear: ⁴² at that time he read it *tamais*. (d) As for the forms corresponding to **stā*, the matter is too involved to be treated here in detail. The important thing to note is that *tiya*- 'come,' *dai*- 'put,' *tittanu*- 'place' can be shown neither for sense nor for phonology to correspond to IE **stā*. Couvreur suggests ⁴³ that IE **st*- should give Hitt. *sit*-, for which there is considerable authority, cf. Hitt. *si-it-tar* 'star,' *sippand* cf. σπένδω, Lat. *spondeo*: the assumption that initial *s* was lost in this word is surely daring (Irish *tá* 'is,' Toch. *tākā* 'was' do not prove the point). That *dai*- plus supine in the sense 'begin' provides an exact correspondent to Russian *stat* plus infinitive, as *on stat kričati* 'he began to cry out,' is another favorite doctrine of Pedersen ⁴⁴ but does not prove etymological connexion.

Sturtevant in a review of Couvreur's theory ⁴⁵ has raised a few more points in the attempt to prove the necessity of a fourth laryngeal. They must also be treated here, though more briefly, since the evidence is by no means as impressive as Sturtevant seems to feel. (a) *a-a-ri* 'is hot' beside IE **ai*-, **aidh*- 'burn,' 'shine.' The assumption that the initial *a-a-* is dissyllabic with loss of intervocalic *i* cannot be proved. Also, the bare root **ai*- as a verbal stem would be unique in Indo-European (Walde-Pokorny, s.v.). Even the nominal stems, it may be noted, do not show this meaning at all and usually have complex increments; e.g. O. Sl. *iska* 'spark,' Russian *yasno* 'clear,' etc. (b) *alpas* 'cloud' beside *albus*, Gr. ἀλφός. We admit the plausibility of this etymology, even though the particular semantic change is not attested elsewhere. But an example like this is by itself not convincing. (c) *appa* we have discussed, and there seems to be no reason to prefer Sturtevant's etymology to Couvreur's. (d) *arwa(e)* 'bow down' to Gr. ἀράσμαι 'pray,' denominative to ἀρῆά 'curse' whose connexion with Sk. *āryati* 'praises' and Lat. *orō*, despite Sturtevant,

⁴² *Murš. Sprach.*, pp. 68-9.

⁴³ *Hett. H.*, p. 200.

⁴⁴ *Murš. Sprach.*, p. 70.

⁴⁵ *Lang.* 12.211-12 (1936) and 14.68-76 (1938).

seems reasonably sure (cf. Ernout-Meillet, s.v. *ōrō*), though the formation is slightly different. Cf. further Gr. ἀρνέομαι and the IE root **ōr/ar* of Hitt. *ariya-* 'consult an oracle,' this last etymology being accepted by Pedersen.⁴⁶ Semantically, therefore, the etymology is indefensible. (e) *au-*, *aus-*, *u-* 'see' beside Lat. *aurora*, Gr. ἥως; compare further the durative *uske-* 'see' with Sk. *ucchāti* 'shines.' This is another of Sturtevant's many etymologies, like (b) just mentioned, which while superficially possible requires us to make a great semantic jump, thus isolating the word in question in IE. That the -s- of the Hittite word can be proved by Couvreur⁴⁷ to be secondary shows that the etymology is completely uncertain. (f) *awan*, already discussed, with valid semantic objections. (g) *istanta-* 'tarry,' *istapp-* 'enclose,' *tit(ta)nu-* 'cause to stand,' *tiya-* 'take one's stand; approach' = IE **st(h)ā*. Sturtevant's translations of the Hittite words are very largely inspired by his opinion as to their etymology, *istant-* meaning 'delay' and *istapp* meaning 'enclose,' neither meaning 'cause to stand.' The truth seems to be that neither in meaning nor in form can these forms be convincingly connected with IE **st(h)ā*; forms of **dō*, **dhē* and perhaps **sthā* seem to have been confused in Hittite so that at present the question cannot be resolved. (h) *maklant* 'thin,' Lat. *macer*, Gr. μακρός, μακεδνός, and μάκος. This strikes us as a sane etymology, but Couvreur's answer (which goes back to Falk-Torp and Curtius in Walde-Pokorny) is satisfactory: parallel bases **mēk/mək*, reduced grade here for the Hittite and Latin words, with normal in O.H.G. *smāhi* 'small' and O.N. *smār* (< **smēko-s*), but **māk/mək* for the Greek words. (i) *man* 'if' beside Gr. μάν is rejected by Pedersen⁴⁸ as well as Couvreur,⁴⁹ and Sturtevant admits it is hard to argue from particles. (j) *mema* 'speak': Gr. μέμνημαι. This is another of Sturtevant's favorite etymologies⁵⁰ although the sound-change of *mn* to *mm* is not proved by the dubious examples he brings forward, and one would expect the spelling with -*mm*- to

⁴⁶ *Murš. Sprach.*, pp. 47-8.

⁴⁷ *Hett. H.*, p. 152.

⁴⁸ *Murš. Sprach.*, p. 59.

⁴⁹ *Hett. H.*, p. 203.

⁵⁰ *C. Gr.*, pp. 133, 85.

be the rule, not the exception. Sturtevant does not mention the fact that, although *memorare*, his semantic parallel, came to mean 'say,' its fundamental meaning 'recall' was always present: in ordinary language it is not a synonym of *dicere*. (*k*) *pai* 'give': Toch. B *ai* 'give,' Gr. *aîsa* 'fate,' Osc. *aiteis* (genitive) 'part,' an etymology of Pedersen,⁵¹ very clever and not convincing, since it remains to be proved that the Hittite is to be analyzed in this way. (*l*) *iya* 'go,' Sk. *yāti*. Sturtevant admits that it is quite as easy to take the word as thematic present to **ei*. (*m*) *taya* 'steal'; we have discussed this above. (*n*) Morphological items, mostly discussed above: neuter plural in *-a*, present suffix in *-na*, denominative in *-a(i)*, ending *-tta* of second person singular pret. of *-hi* verbs (to Sk. *-tha*, Gr. *-θα*).

It seems to us, after a review of all this evidence for a fourth laryngeal, that while certain of the topics raised are in themselves plausible (we refer in particular to Hitt. *alpas*, *taya-*, *pai-*), no single etymology which shows a clear-cut correspondence to the Indo-European root in both form and meaning has yet been brought forward. The case is not strengthened by heaping up weak etymologies: in default of convincing proof to the contrary, we believe that these apparent exceptions to the rules can be otherwise explained. Even if this evidence were much stronger, we should still hesitate to introduce a new IE phoneme on the basis of one language. It should be observed that only Sturtevant goes this far and, as we shall see, there are grave difficulties in the phonetic explanation of his "glottal stop of velar color." In a language which has suffered as much linguistic erosion as Hittite, and has been so much exposed to foreign influence, we must expect to find that our general principles show unexpected exceptions here and there.

From the examples thus far presented, the rule can be deduced that vocalism in *e* is represented by Hittite *e(i)* and that vocalism in *a* should show a Hittite *h* which thus stands for consonantal *a*. The material, however, is susceptible to further schematization. This is furnished by Couvreur in an elaborate survey of the Hittite vocabulary. As the main thesis has been sufficiently established we should like to bring forward some further points, grouped systematically.⁵²

⁵¹ *Murš. Sprach.*, p. 59.

⁵² *Hett. H.*, pp. 89-227.

(A) Initially. Aside from *e*, it should be observed that examples of *ò* (ablaut *o*) are abundantly illustrated; we have cited *arras* 'anus': Gr. ὄρρος. Couvreur finds evidence for the equations, $\mathfrak{b} = \text{Hitt. } a$ (*asanzi* 'are') and $\mathfrak{a}_1 = \text{Hitt. } a$ in derivatives of IE **ēś-* 'sit,' cf. Sk. *āste*, Gr. ἵσται, Hitt. *es-/as-*. As examples of *ó* (fundamental *o*), Couvreur cites the following: *hara(na)* 'eagle' to Gr. ὄρνις, Goth. *ara*, Ch. Sl. *orьlъ*, of which base (**or*) the base **er* is asserted to be independent (e.g. Welsh *eryr*, Old Irish *irar*) rather than in ablaut relation; *harg-* 'be destroyed': Old Irish *org* 'slay,' Gaul. *Orgetorix*; *hastai-* 'bone,' Sk. *āsthī*, Gr. ὀστέον, Lat. *os*; *hullā-* 'smites,' Gr. ὄλλομι, ὄλεθρος; *humant-* 'all,' Lat. *omnis*.

(B) Within words. Normal grade: (a) short vowels: here examples of *e* are numerous and sure: *genu-/Lat. genu*; *melit/Lat. mel*, μέλι; *nepis/Lat. nebula*, νέφος; and some of *ò* — Hitt. *taru* 'wood'/δόρυ. Sure examples of *á* and *ó* are lacking, not unreasonably when we consider the number of sure IE roots in Hittite and the proportionately small number of cases of *á* and *ó* beside *e* in IE. Couvreur cites *eshar* 'blood' as the sole example of *á*, though this is extremely doubtful.⁵³ (b) Long vowels. Surprisingly enough, there are no sure examples for $\bar{e} = \text{Hitt. } e$, although there are some initially to justify the hypothesis. For *á* we have already cited some: *nah(h)* 'be afraid' beside Irish *nár* 'bashful' is a most satisfactory conjecture of Pedersen;^{53a} *pahs*: IE **pā*; *pahhur*: **pāyur/n*; denominative suffix *-ah(h)* = IE **ā*. Couvreur assumes the equation IE $\bar{a} = \text{Hitt. } ahh$, the spelling being significant in the manner described in our introductory chapter. For *ó* there is a single example, *lahu* 'pour': Gr. λούω 'wash,' Lat. *lavare*, IE **lóu*, whence IE *ó* = Hitt. *ah*.

(C) Zero Grade. Here the material is more delicate and the results not entirely clear. Couvreur deduces *a* for IE *ə* from \bar{e} but finds some doubtful cases of a complete zero grade (*tittanu-* 'tarry'). For *ə* from \bar{a} he finds *h(h)*, with examples already discussed: *palhi/Lat. plānus*; *sanhh-/Sk. sanóti*. There are no examples of *ə* from \bar{o} , but it is to be assumed that Hittite would show *h*.

⁵³ We shall not discuss the sources of the *-hi* conjugation although we agree with Couvreur as to their connexion with the thematic present type; this would then be an IE *-a* or *-o* in the first person singular.

^{53a} *Murš. Sprach.*, p. 61.

To the observer of this extremely neat and orderly system two points become immediately clear: (1) the spelling difference of *h* and *hh* must be assumed to be significant, even though *hh* can occur only in intervocalic position; (2) the existence of fundamental *ó* must be assumed for Indo-European. It is clear that unless these two assumptions can be established, Couvreur's analysis of the Hittite evidence is no longer valid in detail, although the general hypothesis (*e* grade for Hittite *e*, *a* grade for Hittite *h*) is still valid. Of course, the assumption of an IE *ó* is not eliminated even though the difference in spelling should be demonstrably a secondary phenomenon. Neither of these questions can be proved at this stage of our knowledge. We believe that Couvreur's two etymologies, *hulla-* to Gr. ἅλλυμι and *humant-* to Lat. *omnis* must be rejected since they are inconsistent with the usual treatment of IE *ó-* (:Hitt. *ha-*) and have nothing else in their favor. In general, we favor Couvreur's treatment, as will appear in our concluding chapter, but we must, like Pedersen,⁵⁴ reserve judgment as to the existence of the third laryngeal (IE *ó*).

The question of spelling is still disputed. It should be observed that Sturtevant assumes that *h* differs from *hh* in order, like Couvreur, to make a distinction between voiced and voiceless laryngeals but of a different sort, as we have seen. For Sturtevant, Hitt. *hh* corresponds to *x* and *h* to *y*, which correspond to *ā* and *ē* respectively in IE. For Couvreur, *hh* corresponds to *h̥* and *h* to *ḥ*, but the Indo-European shows *a* and *o* color respectively. Of course, that *-hh-* is the regular treatment of intervocalic *h*, as Pedersen thinks,⁵⁵ is entirely possible.

However, Pedersen's theory, which is unique in dealing with the Hittite evidence, seems to us to involve certain difficulties and contradictions. Thus, if we are to assume with him that just as *eH*₁ gives Hitt. and IE *ē*, so *eH*₂ gave Hitt. as well as IE *ā*,⁵⁶ there seems to be no reason why Hittite *h* would not have fallen in other positions too. This, as well as the assumption that 'syllabic' *H*₁ and *H*₂ (implying what phonetically?) gave Hittite *a*, would be more likely if

⁵⁴ *Hitt. und die and. i.e. Spr.*, pp. 181, 183.

⁵⁵ *Ibid.*, p. 186.

⁵⁶ *Op. cit.*, p. 183. The phonetic process is different in the two cases.

Hitt. *h* were not a stable sound. Both assumptions are naturally built on etymologies which seem to us unfounded (e.g. *da-ma-a-is*; representatives of IE **stā*). That either 'consonantal' *H* appears as initial *h* is another daring assumption: even though Pedersen denies that every initial vowel implies an original laryngeal, still the fact that *h* is very rare before *e* or *i* and that his three examples are admittedly hard to etymologize⁵⁷ seem insurmountable obstacles to his theory. (That IE *e*- usually turns up as Hitt. *e/i*- would of course be explained by Pedersen as showing no laryngeal.) It does not seem to us at all possible, considering the nature of Hitt. *h*, that it could have united with a previous stop,⁵⁸ especially since he is obliged to make exceptions for *s*, *r*, and *l*, and his examples may be otherwise explained (for *mekkis* and *suppis* cf. our discussion). Note that Pedersen still sees other sources in part for Hitt. *h*: *ha-at-ra-a-mi* 'I write' from the Assyrian *šaṭāru*,⁵⁹ implying a Hitt. **š* of which there is no further evidence. (Indo-European *s* always gives Hitt. *s*, and we suggest that if this word was borrowed from Assyrian, it was not done directly and the sound shift of *s* to *h* was made before the word was borrowed into Hittite.) Pedersen is even willing to assume⁶⁰ that *kī* and *gī* > **š* > *h*, and even that *pī* went the same way, although the reason for assuming these extensive sound shifts is only that he may explain three or four very shaky etymologies. In view of the admitted fact that *k* and *g* remain in Hittite before *e* or *i* (*gi-e-nu* 'knee,' *ki-es-sar* 'hand,' *ki-it-ta-ri* 'lies'), it seems unreasonable to propose extensive palatalization for the language. Pedersen seems to be the sole representative of the laryngeal hypothesis who still sees a source other than laryngeal for Hittite *h*. In this respect he seems to propose some of the views of the earliest Hittologists and to be grievously in error, as they were. Consequently, we cannot accept his views of the Hittite material.

⁵⁷ *Ibid.* (a) *he-gur* 'cliff' to Gr. *ἄκρῖς* or perhaps to Sk. *ágram* 'point.' (b) *henkzi* 'bows' has no etymology. (c) *henkan* 'death' we have cited, with Couvreur's objection. The reader may be assured that most of Pedersen's examples have been treated in our text, except for the cases of so-called 'palatalization.'

⁵⁸ *Ibid.*, p. 184.

⁵⁹ *Ibid.*, p. 138.

⁶⁰ *Ibid.*, pp. 176-9.

The question of Indo-European *ó* (fundamental, not due to ablaut), while closely connected with our theory, lies somewhat outside of our investigation. Some of the points raised by Sturtevant in an article entitled *Hittite Evidence against Full-Grade O*⁶¹ may, however, be mentioned here. It is perfectly true that Hitt. *nekuz* 'evening,' *nekuzi* 'it is evening' show that the IE base which means 'night' is **n^e/o-q^u* with ablaut variations; the same applies to Hitt. *nekumanza* 'naked' from **n^e/og^u* so that these two roots do not show -*ó*.⁶² The Hitt. *beda-* 'dig': Lat. *fodio*, Lith. *bedù* 'dig' is also convincing, especially if we may read the Hittite word *be-da* rather than *píd-da*. But with reference to Couvreur's etymology *lahu-* 'pour' to Lat. *lavo*, Gr. *λούω*, the fact that the verb forms may be spelled, though rarely are, with *hh* is not at all sufficient counter-evidence: Sturtevant forgets that intervocalically *hh* is infinitely more common, so that even a fairly consistent writing as *h* is sound proof. Furthermore, the noun *lahhus* may not be translated etymologically 'wash-basin' and used as proof of the *hh*, since it is only a container of some unknown variety, and the consistent *hh* seems to separate it from the verb *lahu-*, if one believes, as Sturtevant does, in the validity of such a distinction. As for the excellent etymologies already cited (*haras*, genitive *haranas*, *hark*, and *hastai*)⁶³ Sturtevant has no criticism to find with them, but can only suggest certain other words which might just as well betoken full grade *ó*, but show no Hittite *h*: *para* 'before,' cf. Gr. *πρό*, Sk. *pra*, Lat. *prō*; *ais*, genitive *issas*, 'ōs, ōris,' Sk. *ās-ā*; *pas* 'swallow,' cf. Gr. *πῶμα*, Lat. *pōtiō*; *da-* 'take' to Gr. *δίδωμι*. To this one might logically reply that, even though all four of these words should turn out to have fundamental *ó*, this would not affect in the slightest the fact that Couvreur's three good etymologies still stand unchallenged, that these do show *h* and do correspond to an IE *ó*. Moreover, *para*, a preverb indicating direction away from, may better be identified with **per*, and the other

⁶¹ *Lang.* 14.104-11 (1938).

⁶² Few will believe that the two are related in 'Indo-Hittite' as Sturtevant claims, through the concept 'people take off their clothes' = 'night fall'!

⁶³ That *happar* 'price' should be related to *epus* as Sapir supposed is most unlikely and is here not accepted.

etymologies (except *ais*) have been disputed on excellent grounds. Another argument against the *o*-laryngeal is what Sturtevant terms the 'rather strong, although limited evidence' for interpreting *-h-* as the glottal stop, or better,⁶⁴ the voiced variety of *x*, called *γ*. What Sturtevant wants, of course, is to justify three of his very weakest etymologies: *weh-* 'turn,' cf. Lat. *viēre* on the basis of **ueiey-* (although the unexplained grade *wah-* and the spelling confusion with *war-* 'burn' may well show a foreign word, and the etymology is not at all convincing as to sense, nor would this base give Lat. *viēre*, but rather **vēre* with loss of the intervocalic *i* as in *trēs*); *sehur* 'urine' to O. Ice. *sūrr* 'sour,' *saurr* 'semen,' Lat. *sēmen*; *mehur* 'time, moment' to IE **mē* 'measure.' It should be observed that *sēmen* is cognate with *sero*; the two Scandinavian words undoubtedly belong together, but the connexion is not as Sturtevant implies. He has completely mistranslated *saurr* which means 'mud, dirt, filth' as originally applied to the sour soil of bogs and swamps. The Latin and Scandinavian words are therefore unrelated concepts and neither root seems related to the Hittite word as to sense. *Mehur*, as Couvreur points out,⁶⁵ means 'moment, occasion' and therefore cannot be compared with Germ. *mal* and its cognates; this is not a convincing etymology. It follows, first, that the evidence for interpreting *-h-* as *γ* is much more limited than persuasive and, second, that Sturtevant's objections to the Hittite evidence for *ó*, as collected by Couvreur, are entirely unconvincing. So much we can say, but the larger question of the existence of *ó* in Indo-European cannot be so decided.

Let us summarize briefly the results of our analysis of the Hittite evidence for the laryngeal hypothesis. What we have done is to take as a basis for further development the introductory material of our first chapter, where we proved the independent origin of *h* and noted its single and double spelling. We then analyzed nearly all the significant items of the Hittite vocabulary which have valid etymologies and which bear on the question. As far as the Hittite itself is concerned,

⁶⁴ *Op. cit.*, p. 109, footnote 20a where this correction is made. Neither *ɣ* nor *γ* affects the vowel color. This is naturally very like the view of Pedersen's just mentioned above, that consonantal *H*₁ or *H*₂ always gives *h*.

⁶⁵ *Hett. H.*, pp. 203-4.

we may state conclusively that an IE *a*-grade seems to have had a laryngeal, for we find it represented in the Hittite *h*. Contrary examples of Hittite *a* in this position can, for the most part, be easily dealt with. There is evidence, at least in Hittite, for an IE *ó*-grade; although we have not committed ourselves here, the case of Couvreur seems to us strong and entirely proof against the attack of Sturtevant. The fact that IE **ē* corresponds to Hittite *e*, and its ablaut partner *o* to Hittite *a*, may be interpreted in two ways: either there was no laryngeal accompanying this vowel in IE, or, if it existed, it must have been of a different phonetic nature from the sound or sounds represented by *h* (*hh*) since it has left no trace in Hittite corresponding to IE initial *e*- or to *ē*. It is only, therefore, the parallelism of *ē* to *ā* and to the diphthongs, as cited by de Saussure, together with the range of IE phenomena already discussed which lead us to postulate a laryngeal corresponding to *ē* and, at least in part, to initial *e*:- this can be only the glottal stop. It follows that we are assuming two, or possibly three laryngeals after the fashion of Pedersen,⁶⁶ but adopting the treatment of Couvreur against Pedersen. The reader will recall that this treatment is substantially that of Kuryłowicz, except that the latter, who does not deal at all thoroughly with the Hittite evidence, claims to find only *ǵ₂* in Hitt. *h*:⁶⁷ as, however, he expressly states⁶⁸ that his *o*-colored laryngeal *ǵ₃* is only the voiced counterpart of voiceless *ǵ₂*, there is no reason why one should not, *a priori*, find this also represented by Hittite *h*, and we believe that Couvreur's elaborate treatment requires this change in the system of Kuryłowicz. It should be observed that Benveniste quite wrongly believes⁶⁹ the theory of Kuryłowicz to be just that: *ǵ₂* and *ǵ₃* give Hittite *h*. Inasmuch as Kuryłowicz believes in an IE *o*-grade, it is clear that Couvreur's position is really identical with his in this respect and should lead to the same assumption, especially if the Hittite spelling distinction is authentic.

Against the highly original theories of Pedersen we have adduced

⁶⁶ *Hitt. und die ind. i.e. Spr.*, p. 180.

⁶⁷ *Études*, p. 73.

⁶⁸ *Op. cit.*, p. 254.

⁶⁹ *Origines*, p. 149.

what seem sufficient counter-arguments. To us, these theories rest on very insecure etymologies. Pedersen's system, like that of Sturtevant's, is greatly deficient in phonetic justification. In our concluding chapter, we should like to discuss in some detail the nature of the laryngeal consonants whose existence we have been assuming, at the same time giving a final evaluation of the various arguments we have passed in review. We shall then make our final picture of the laryngeals and their place in IE vocalism.

IX. CONCLUSION

With the exception of the few hints given by Cuny, no one but Couvreur¹ has bothered to give a really adequate phonetic explanation of what a laryngeal consonant is in the first place, and how it can be responsible for the changes ascribed to it in the second. Edward Sapir, it is true, has drawn some analogies between the action of the assumed laryngeals and the so-called 'glottalized continuants' found in certain of the American Indian languages,² but it seems to us that the phenomena described are not parallel and that Sapir has used his Indo-European laryngeals as a catch-all to solve all the problems. Notice that in Navajo these curious consonants arose from a combination of the unmodified voiced sound with a preceding *d*-element; in Nootka, while the glottalized consonants are older, they are said to derive from a combination of unmodified consonant plus a suffix with inherent 'hardening' power, the process itself of glottalization being called 'hardening.' But it can be shown that the suffix in question did not begin with a simple glottal stop, and the precise source of the glottalization is by no means sure. One would also welcome a good deal more light on the phonetic nature of these sounds. At any rate, there is as yet not a scrap of evidence in Hittite or elsewhere in Indo-European, which makes it necessary for us to invoke such phonemes for Indo-European. We do not need the four laryngeals Sapir postulates (obviously the direct source of Sturtevant's theory as of his notation), still less such entirely new phonemes as 'voiceless semivowels' which, we have seen, need not

¹ *Hett. H.*, pp. 257-265.

² *Language*, 14.248-274 (1938).

be assumed to fit the fallacious arguments³ of Austin and Smith. It seems to us far more probable that the immediate parallels should be sought rather in Semitic, as the nearest and most likely comparison, than in the obscure languages of the New World aborigines, especially since we are not entirely sure of the origin of these sounds, nor of their nature. Glottalized continuants and semivowels, it may be added, are found only very rarely in human speech and not within the Indo-European area.⁴ We prefer, therefore, to discount Sapir's hypothesis.

For the assumed IE consonants, we know certain conditions: (*a*) they are presumably gutturals, (*b*) are capable of changing *e* to *a* (or *o*), (*c*) can easily be lost, (*d*) exist in a relation of voiced to voiceless, the first being the *o*-colored, the second the *a*-colored (Couvreur, Benveniste, Kuryłowicz). Of the five possible guttural series, as Couvreur points out,⁵ the palatal, velar, and labiovelar series may be immediately eliminated as being otherwise represented in Hittite (by *k*, *k*, *ku* respectively). This leaves the pharyngeal and laryngeal series. The pharyngeal (deep guttural) series is produced at the root of the tongue slightly behind the palatal spirant (*ich*-laut) articulation and the velar spirant (*ach*-laut) articulation, and is exemplified by Semitic *ḥā* and Arabic *ğāʾin*. It is true that the Accadian sound corresponding to *ḥā* in Semitic is represented by *h* in the cuneiform, but this may not be taken as proof with regard to the Hittite language. The double spelling *hh* is rare in Accadian; also, these consonants are very strongly uttered and are consequently stable. Accadian itself, for example, although it confused Semitic *ḥeth* and *ʾāin* with *aleph*, still preserved the pharyngeal. The significant fact that Accadian texts from Boghazköi show repeated confusion of *ʾ* and *h* cannot be explained if Hittite *h* represented the strong Accadian pharyngeal, but it is explicable if the Hittite scribe took the *h* as his own laryngeal spirant.

The conclusion is, therefore, that we have to do with the laryngeal series. We may distinguish here a laryngeal occlusive (the glottal

³ Cf. our Chapter VII.

⁴ Glottalized stops are found in Caucasian.

⁵ *Hett. H.*, p. 257.

stop) and a laryngeal spirant. The laryngeal occlusive or glottal stop, which sounds like a weak cough, "is produced by closing the glottis and releasing the pressure with a sudden plosion."⁶ It corresponds to the Semitic *aleph* and in the initial position or before a vowel in hiatus is one way of leading up to a vowel: so-called 'fester Einsatz' is regular in the pronunciation of an initial vowel in German. Other languages, e.g. French, have so-called 'leiser Einsatz,' that is to say, without initial glottal stop. We have already had occasion to refer to the Greek smooth breathing as also 'leiser Einsatz'; this is sufficiently attested not only by such Greek phenomena as contraction, elision, and the like, but by the implications of the word *ψιλος*⁷ as opposed to *δασύς* in the sense of 'without something normally accompanying it,' and by the notation of smooth breathing only infrequently beside that of the rough breathing in our earliest manuscripts. This is the view of Sievers,⁸ in whose opinion the German 'fester Einsatz' is a relatively late phenomenon. That the *spiritus lenis* could represent 'fester Einsatz,' as certain German scholars have asserted,⁹ seems to have no basis in fact. In general, it seems relatively certain that the historical Indo-European speeches had 'leiser Einsatz,' though the occurrence of the glottal stop (non-phonematic) as in English is not excluded. The glottal stop, which is a phoneme in Danish and Arabic, is always voiceless,¹⁰ and no evidence of effect on the color of a neighboring vowel is attested for it: the Accadian *aleph*, for example, shows none. It seems, then, most likely that this is exactly the sound required to account for the normal-grade *ē* of Indo-European and its corresponding *e* in Hittite, where no *h* ever appears. There is even fair evidence for its position initially in Hittite: we refer here to a phenomenon not discussed previously, namely, the doubling of an initial vowel in the Hittite spelling which is at least not the sign of lengthening (cf. *e-es-mi* 'I am' IE **ēs-mi*). This argument, put forth somewhat distrustfully by Cuvreur,¹¹ may well

⁶ Noël-Armfield, *General Phonetics*, p. 107.

⁷ E. H. Sturtevant in *TAPA* 68, 112-122 (1937).

⁸ *Grundzüge der Phonetik*, p. 151 (1901).

⁹ Notably Hirt, *Handbuch der Gr. Laut- u. Formenlehre*, p. 90 (1912).

¹⁰ Sievers, *op. cit.*, 358, "der stimmlose Kehlkopfexplosivlaut."

¹¹ *Hett. H.*, pp. 246-50.

satisfy the Hittite facts, especially since elision and contraction (except for the *u-* and *pe-* prefixes) seem to be lacking in Hittite, whence it might be argued that Hittite, which does not carry out this spelling everywhere, was in process of losing the 'fester Einsatz,' as Accadian was also doing. But there is naturally an alternate hypothesis which would assume that from the very earliest times the Indo-European languages possessed 'leiser Einsatz;' we should then be obliged to consider the Hittite initial vowel doubling as non-significant (there is no agreement on the matter), and should then be tempted to explain away certain examples of Greek prothesis listed by us for stems beginning in a vowel (*e.g.* Hom. *ἔασσι*) and of lengthenings in Vedic (*āsat-* 'inexistent'). However, the argument is cumulative, and it seems better to assume because of this varied evidence, that at least a certain number of significant roots began with the glottal stop, especially since we are already obliged to assume its existence internally. Whether this last logically requires us to suppose the existence of original IE 'fester Einsatz' is another question, and a much disputed one.

In this connexion we should like to take up the discussion of Sturtevant's famous 'glottal stop of velar color' to which we have already made reference several times. The reader will remember that Sturtevant and certain other scholars use this consonant to explain the cases of Hittite *a* (not *ha*) which seem to correspond to IE *a*. That the etymologies cited to justify this assumption are exceedingly weak in the first place and rest on the testimony of one language in the second, has seemed to us good reason for rejecting the argument. It will be recalled that the second objection was of sufficient weight with Kuryłowicz to prevent his assuming four consonantal *schwa*'s though he was strongly tempted to do so.¹² But there are certain phonetic matters at which we hinted in the beginning and which seem to rule out Sturtevant's argument entirely. This scholar has taken over his symbol (?) from Sapir who uses it with reference to the Indian languages, notably Nootka, to denote what is most unscientifically described¹³ as "a laryngeated ('strangled') glottal

¹² *Études*, pp. 29-30.

¹³ Cf. the article already cited, *Lang.* 14.254.

stop phonemically [sic] different from the glottal stop." That this sound should be phonematically distinct from the glottal stop is comprehensible, but what it is is entirely undefined by Sapir. Sturtevant, whose sovereign disdain for phonetics we have illustrated in the case of the *-ka* perfect, has never given us any inkling of what his symbol (?) may represent phonetically. And yet one might have expected that a sound so extraordinary and attested in so remote and obscure a language would at least require an ample phonetic justification in order to be extended to the whole Indo-European family. This much seems clear: whatever the curious sound may be which can be designated ? in Nootka, it is very unlikely to be a glottal stop, inasmuch as phoneticians recognize only one such (?). As the sound in question is merely the effort of opening the glottis, it is clearly incapable of a different place of articulation or of a different sort of control; in this respect, the glottal stop is unique and does not permit of variation. Therefore, until Sturtevant has informed us what his symbol means phonetically, we must believe that his fourth laryngeal is as meaningless as it is unnecessary.

The laryngeal spirants, two in number, are represented in the Semitic language: voiced *ʿain* (ʿ) and voiceless *heth* (h). Such a relationship is of course essential for the Hittite *hh/h* distinction, if we consider this valid. At the same time, the exact nature of *ʿain* is somewhat obscure: though the Arab grammarians consider it voiced, it is not possible to sing upon it.¹⁴ It is significant that these sounds are capable of changing the color of the Semitic fundamental *a*-vowel (to *e*) in Accadian and elsewhere. Furthermore even in Semitic they are notably unstable sounds outside of Arabic: thus Accadian significantly confuses *h* and ʿ with ʾ after the *h* or ʿ had produced a change in the neighboring vowel; modern Abyssinian confuses ʾ and ʿ, as does modern Syriac. It will be apparent, therefore, that these are precisely the sounds which meet the phonetic conditions we have set.

Note that Sturtevant who wants to assume a voiced laryngeal in 'Indo-Hittite,' but denies that it was *o*-colored, is obliged to go far afield to find a use for his sound, *γ*. Thus in an article, *Evidence for*

¹⁴ Noël-Armfield, *General Phonetics*, p. 111.

Voicing in Indo-Hittite γ ,¹⁵ Sturtevant raises (besides the spelling distinction of Hittite) six heterogeneous points.

(1) Voicing of *pibati* which we deny is due to a laryngeal at all. That Hittite *paszi* 'swallows' (not surely related) should have developed with analogical *zi* along the route $*\text{po}\gamma\text{sti} > *\text{pos}\gamma\text{ti}$ or $*\text{po}\gamma\text{ydi}$ is clearly illogical, since the γ is metathasized by Sturtevant for no other reason than to avoid the development to $*\text{p}\bar{o}\text{sti}$, Hitt. $*\text{pasti}$ (-st- remains in Hittite), postulated by Sturtevant's own theory.

(2) *ZÁhekur* 'peak' cf. Sk. *giriḥ*, O.Ch. Sl. *gorā* 'mountain,' Gr. *δειρός* 'hill,' the whole taken as 'Indo-Hitt.' $*\gamma\text{egur}/\gamma\text{guer}$. If the stem had original *k*, we are further to compare *ὄκρῖς* 'jagged' and Lat. *ocris* 'mons confragosus' (Paul. Fest.) with the suffix *-uer/-ur*. Here is still another etymology for this troublesome word, even less satisfying than that proposed by Pedersen. The Greek word shows an impossible vocalism, and on Sturtevant's theory one might expect prothesis; and how are we to account for the first *i* of *giriḥ*? The etymology of course assumes the treatment of γ which is to be proved.

(3) That any of the three voiceless laryngeals initially + μ gives the Attic rough breathing is a groundless assumption already discussed. It is a most egregious error to assert that *therefore* initial voiced laryngeal before μ would give Attic smooth breathing: after all, Sturtevant wants us to believe that γ equally with x produced a Hittite *h*, and the difference is one of voicing between γ and x . This is not the distinction between smooth and rough breathing.

(4) There are better ways of accounting for Attic *ἐάγην*, aor. pass. of the verb *ἀγγνμι*, and at any rate no positive evidence to link this with the hypothesis of (3) above.

(5) That *eshar* is from $*\text{e}\gamma\text{s}\gamma > *\text{e}\text{s}\gamma\gamma$ is no more reasonable or sound a change than that proposed in (1) and requires a host of secondary assumptions.

(6) The smooth breathing of *ἵαομαι* is no better explained if we assume intervocalic -s-. Notice further that the stem is here set up as $*i\gamma\text{se}/o$, rather than $*i\text{s}\gamma-$, as for (1) and (5), presumably because the metathesis does not fit so well. It is clear that these topics are most haphazard and prove nothing at all for the assumed voiced

¹⁵ *Lang.* XVI, 81-87 (1940).

laryngeal γ . Furthermore, the proposed treatment of the group $-\gamma s$ is not followed throughout.

To prove that the laryngeals thus assumed can be responsible for precisely the effects we attribute to them in IE vocalism, we may draw upon some of the ample Semitic examples collected by Couvreur¹⁶ and cite many parallel cases. First, the lengthening of the preceding vowel to the corresponding long vowel by a laryngeal occlusive before a consonant is frequent: Class. Arabic *bu's*, *bi'r* > popular *būs*, *bīr*; from Semitic *r*'s 'head' comes Accadian *ra'su* > *rāšu*, Hebr., *ra's* > *rāš*; Abyssinian continues to write the ' in this position but with lengthening of a preceding vowel, as *ma'kala* > *mā'kala*. Modern Danish shows the same process, since the glottal stop follows the long vowel, but follows the consonant after the short vowel: *horn* (\bar{o}) is *ho'rn*, but *horn* (\bar{o}) is *hor'n*. The identification of our assumed glottal stop with de Saussure's *A* and Kuryłowicz's \mathfrak{a}_1 is therefore paralleled elsewhere and is a necessary assumption to put IE \bar{e} on the same level as IE \bar{a} or \bar{o} , especially since the reduced grade of \bar{e} is \bar{a} .

The assumed laryngeal spirants, which would account for IE \bar{a} , \bar{o} and are represented by Hittite *hh* and *h* (with the proviso already established), may also be closely paralleled in Semitic. Here the Accadian is particularly instructive, since the *h* and ' , after changing the color of a vowel, coincided with ' , subsequently to be lost itself, just as we are assuming for our Indo-European laryngeals. Thus Accadian *ba'lu* 'lord' > *be'lu* > *be'lu* > *bēlu* while Accadian *rahma* 'pity' > *reḫmu* > *re'mu* > *rēmu*.¹⁷ It is striking to notice that while the ' has no effect on vowel color but can lengthen it, the *h* and ' here change the color: a further distinction would be that there are really two processes involved of which the first is necessarily the confusion of *h* and ' with ' , the second, the disappearance of ' . This is the relationship which we assume between the Hittite state and that of the other IE languages, although of course the relationship is not as of anterior to posterior in time, as Sturtevant assumes, for the changes were made independently in the separate languages. To judge by the theoretical evidence of Semitic, IE \bar{e} ($e + '$) would be the oldest, while \bar{a} (and \bar{o}) would presume the development $e\bar{h} > a\bar{h} > a' > \bar{a}$.

¹⁶ *Hett. H.*, pp. 270 ff.

¹⁷ *Hett. H.*, p. 274.

We believe that this sort of phonetic background may be successfully invoked to explain the reduced grade. Here, however, we cannot entirely follow Couvreur's explanation inasmuch as his evidence for a full zero grade is based on two unconvincing Hittite etymologies.¹⁸ Again we assume two stages (and also take as genuine the parallelism assumed by de Saussure between **dhē* and **kēi*): the reduced grade of *e+* ' is accordingly ' whose vocalization is IE *a*. We do not favor the triple development proposed by Couvreur whereby ' can either be lost, become *a*, or become the reduced vowel. To us it seems more likely that there is a single development to *a* which may then fall under certain conditions. We do not believe in the theory of the reduced vowel, preferring to follow the American scholars Edgerton¹⁹ and Petersen²⁰ in their attack upon this doctrine of Hirt's. To us the Hittite evidence, no less than the Indic and Graeco-Latin, can be quite satisfactorily explained without this sort of over-schematization. As the Hittite treatment of the reduced vowel is in any case identical with that of *a* (from *ē*), it is easy to explain such forms as *pahs-* (for a theoretical **phs*) as extension of the normal grade; other cases can be explained as analogical extension of the *ē/a* (*a=a*) variation. For Hittite, the evidence pointing to Hittite *hh* (*h*) in the reduced grade corresponding to *ā* (*ō*) is limited, but there seems no reason for doubting it; the logical assumption in any case would be that since the *h* (*h*) has been preserved in the normal grade, it should persist also in the reduced. Only when the *h* and ' had become ' would the reduced grade of all three laryngeals be identical (*=a*) for all IE. Such testimony as Hitt. *palhis* (*p_ha₂-*) seems to us incontrovertible. There is then in the reduced grade as in the normal grade the identical relationship of the more stable laryngeal spirant on the one hand to the less stable laryngeal occlusive on the other, and here again it is the Hittite evidence which must be decisive.

We have been led, then, as a result of our investigation to assume the existence in Indo-European of a glottal stop, one voiceless, and

¹⁸ *Op. cit.*, p. 277. The argument is not itself impossible, but the Hittite consonantal doubling in these cases is insufficient evidence. It is a question of Hittite *tittanu* 'place' and *zikki*, also 'place.'

¹⁹ *Lang.* 10.235 ff (1934).

²⁰ *Lang.* 14.39-59 (1938).

perhaps one voiced laryngeal spirant, the latter depending on the existence of non-ablaut $\check{\delta}$ in IE and on a spelling device of Hittite. The long vowels, not lengthened, of IE find their explanation in the combination of fundamental e with these three consonantal or sonantal elements, the consonantal ϑ 's of Kuryłowicz, which are under certain conditions, contrary to the theory of Kuryłowicz, capable of vocalization to the ϑ vowel of Indo-European: (before a consonant) $e + \text{' } = \bar{e}$, Hitt. e ; $e + h = \bar{a}$, Hitt. $ah(h)$; ($e + \text{' } = \bar{o}$, Hitt. ah). Initially, $\text{' } + e = e-$, Hitt. $e-$; $h + e = a-$, Hitt. $ha-$; ($\text{' } + e = o-$, Hitt. $ha-$). Internally, there are examples for normal grade $e =$ Hitt. e , but none corresponding to IE a , (\acute{o}), although one expects Hittite $h(h)a-$; in Indo-European one posits this development from a laryngeal after a consonant and before the fundamental vowel, and we have accepted the argument of de Saussure and Kuryłowicz which confirms this hypothetical proof by the presence of the voiceless aspirates of Indo-Iranian. We may remark in passing that the precise relationship of ablaut- δ to these various equations remains obscure: one would assume *a priori* that it would behave exactly like e towards h and ' , but would be lengthened by ' to \bar{o} (Hitt. \bar{a}). A further necessary remark is that we take the Hittite $h(h)$ as entirely consonantal and incapable of vocalization,²¹ a fact which should be clear from our discussion. If the 'fester Einsatz' was not universal in IE, there seems to be enough evidence to prove that many words began with it: on this basis we can accept, with the reservations already made, the assumed vocalization of an initial laryngeal as seen in the phenomenon of Greek and Armenian prothesis. Note that in all cases, the color of the prothetic vowel will not be significant, however, since the prothesis should naturally follow the regular reduced grade and has thus been altered from ϑ just as elsewhere in Greek, where, it will be recalled, we did not accept the Greek triple representation of ϑ as original. For the reduced grade, we favor a modified form of the account of Couvreur: the zero grade of \bar{e} ($e + \text{'}$) is ' and ' can vocalize to ϑ ; the zero grade of eh and e^c should be h and ' , but we can assume that at a very early stage these sounds were identified with ' : hence it is apparent why the only reduced vowel which alter-

²¹ Contrary to Cuny, *Revue hittite et asianique* II, p. 205 (1931).

nates with \bar{e} , \bar{a} (and \bar{o}) is always a . There is to us nothing in favor of the complicated and unsatisfactory theories of weak grade advanced by Kuryłowicz and Sturtevant. In Hittite one finds a for a , as everywhere except Indo-Iranian, and one can safely anticipate $h(h)$ in the reduced grade corresponding to \bar{a} and \bar{o} . We assume that our laryngeals were very early lost in intervocalic or interconsonantal position, though the latter lasted longer (*cf.* Greek treatment). It does not appear unlikely that some of the Vedic lengthenings and sandhi phenomena cited by Kuryłowicz may be ancient traces of a laryngeal, but we must repeat here that this argument in itself is untrustworthy. Of the other evidence presented here, it will be remembered that we have explained away the alleged voicing effect of laryngeals as proposed by Kuryłowicz and Pedersen, together with the entirely fanciful attribution to a laryngeal of the Greek $-\kappa a$ and aspirated perfects (Sturtevant) or to the Germanic *Verschärfung* (Smith). It follows that the case for the laryngeal hypothesis rests (*a*) on the facts of IE ablaut, the peculiarities of long vowels in normal grade alternating with single a in reduced grade, with the conclusions, mostly correct, drawn therefrom by de Saussure; (*b*) the confirmation in Hittite, with the $h(h)$ turning up in cases of IE a or o vocalism; (*c*) the Indo-Iranian voiceless aspirates; (*d*) the phenomena of prothesis; and (*e*) secondary evidence: the Attic reduplicated forms cited by Kuryłowicz, and the Vedic material just mentioned. In the course of our exposition, we have tentatively attached ourselves to the two-fold theory of the root advanced by Benveniste, but without drawing from it the curious conclusions of Kuryłowicz with respect to 'Schwebeablaut' variation in the reduced grade. In our exposition of the Hittite material, we have tried to steer a middle course, especially in dealing with etymology. We found no evidence for Sturtevant's 'glottal stop of velar color' and indeed could also refute this concept in the course of our phonetic treatment. In this last section, we offered a phonetic justification for our assumptions, pointing to the very close parallels existing in Semitic treatment of the laryngeals. In our opinion, the laryngeal hypothesis must be acknowledged to furnish a convenient explanation of the facts of IE quantitative ablaut: we think further that we can justifiably assume a glottal stop

and a voiceless, possibly also a voiced laryngeal spirant in Indo-European, on the basis of the arguments here discussed. That the laryngeal hypothesis is no philosophers' stone to dispose of all problems of IE can be readily admitted, but in the field of vocalism and ablaut, we believe that the salient problems can be competently settled by its assumption.¹

¹ I am glad to express my thanks to Professor Joshua Whatmough for helpful advice and for supervision of a difficult manuscript, despite inroads upon his own time, while I was serving overseas.

THE KNOWABILITY AND DESCRIBABILITY OF GOD IN PLATO AND ARISTOTLE

BY HARRY AUSTRYN WOLFSON

THE conception of God as a being who is above knowledge and description has been common in religious philosophy ever since Philo. This conception is generally represented as a philosophic principle, though also supported by appropriate Scriptural quotations. But how far back in the history of philosophy it can be traced is a question which has never been satisfactorily answered. In this paper we shall try to find out whether this conception of God as unknowable and indescribable is to be found in Plato and Aristotle.¹

I

It may be true that Plato is the first systematic theologian.² But if so, his theology has the peculiar characteristic that it dwells more on what may be considered the subordinates of God than on God himself. Compared with the part played by the ideas in the Platonic system of philosophy that of God seems rather insignificant. In fact, whenever in approaching Plato from the direction of the subsequent history of philosophy we wish to ascertain his view on any phase of the conception of God which in later speculation became a subject of articulate discussion, we have to derive it indirectly from what he says about the ideas. For, with the exception of the *Laws*, throughout his dialogues Plato treats of God either as one of the ideas, a supreme idea, the idea of the good, or as a being above the ideas, a Demiurge, who cannot, however, but be of the same nature as the ideas. Now in the speculations of the subsequent history of philosophy, the basic

¹ As a chapter in a work on Greek philosophy, introductory to a series of studies on religious philosophy of which two volumes on Philo are now in press, this paper contains general statements on certain moot points which are fully discussed in other parts of the studies.

² E. Caird, *The Evolution of Theology in the Greek Philosophers*, 1923 ed., p. 58.

principle in the conception of God which is assumed to lead to the conclusion that He is unknowable and indescribable is the belief in His incorporeality, simplicity, and immutability. In Plato this belief is directly asserted with regard to the ideas. The ideas, according to him, are incorporeal,³ they are "invisible and imperceptible by the sense,"⁴ they are separate from the things which participate in them,⁵ they are assumed to exist (*εἶναι*) each absolutely for itself,⁶ they are one in kind or simple (*μονοειδές*),⁷ they are each for ever in the same state (*κατὰ ταῦτά*) immovably,⁸ they do not admit of any change⁹ or alteration.¹⁰ Indirectly, from his criticism of the popular conception of the gods, it may be inferred that his own God, whether one of the ideas or a being above the ideas, would also be described by him in the same terms as the ideas. Thus speaking of the popular conception of the gods, he argues, evidently from his own conception of God, that "it is impossible even for a god to wish to alter himself, but, as it appears, each of them, being of the fairest and best possible, abides for ever simply in his own form,"¹¹ that they "cannot be supposed to have either joy or sorrow,"¹² nor can they be supposed to grieve or laugh,¹³ nor, finally, are they "easy to win over when bribed by offerings and prayer"¹⁴ nor do they "betray justice for the sake of gifts offered by unjust men."¹⁵

But the very same passages in which Plato asserts the incorporeality and simplicity and immutability of the ideas also seem to imply that he would not hesitate to describe all these ideas by such predicates as "existent," "simple," and "for ever the same." Still more directly does he show his readiness to describe God, who is either one of the ideas or a being like the ideas but above them, by such predicates as

³ *Soph.* 246B.

⁴ *Tim.* 52A.

⁵ *Parm.* 130B.

⁶ *Phaedo* 100B; cf. *Parm.* 128E; *Rep.* VI 507B.

⁷ *Phaedo* 78D.

⁸ *Tim.* 38A.

⁹ *Phaedo* 78D.

¹⁰ *Ibid.*

¹¹ *Rep.* II 381C.

¹² *Phileb.* 33B.

¹³ *Rep.* III 388C, E.

¹⁴ *Laws* X 885B.

¹⁵ *Ibid.* X 907A; cf. *Rep.* II 364B.

"good" (ἀγαθός)¹⁶ and "wise" (σοφός)¹⁷ and "simple" (ἀπλοῦς)¹⁸ and "true" (ἀληθής)¹⁹ and "most righteous" (δικαιότατος).²⁰ Now the application of such predicates to ideas, on the basis of Plato's own particular theory of predication, would seem to clash with his conception of the ideas as being each simple and indivisible in their nature. According to this particular theory of Plato, whenever any term is predicated of a subject, that subject is assumed to participate in the idea designated by the term predicated of it. When, for instance, a man is described as living and rational and good and great, it means that the man so described participates in the ideas of life, rationality, goodness, and greatness, so that the essence of that man cannot be considered as something simple and indivisible; it must be considered as consisting of all those ideas in which it participates. By the same token, ideas also are said to participate in all the other ideas which are predicated of them. When, for instance, the idea of the good is said to be existent and one, it means that the idea of the good participates in the ideas of existence and oneness, and hence it further means that the idea of the good, if so described, is not simple, as it is assumed to be, but is rather a composite of three ideas, goodness, existence, and unity. Now if all this is to be implied in the description of ideas by any positive terms, how then can ideas, which are assumed to be simple, be described by any such terms?

This question is dealt with by Plato himself in two of his dialogues, in the *Parmenides* and in the *Sophist*.

In the *Parmenides*²¹ the question is raised with regard to the application of opposite terms, such as unity and multiplicity, likeness and unlikeness, both to sensible objects and to ideas. In the discussion of this question, a distinction is made by Socrates, who acts as spokesman for Plato, between terms predicated of sensible objects and terms predicated of ideas. In the case of sensible objects, he says, it is possible to predicate of them opposite terms, for sensible objects are composite objects, they consist of a variety of parts, and this variety of parts makes it possible for them to have a variety of respects and a

¹⁶ *Tim.* 29E; *Rep.* II 379A.

¹⁷ *Phaedr.* 278D.

¹⁸ *Rep.* II 382E.

¹⁹ *Ibid.*

²⁰ *Theaet.* 176C.

²¹ *Parm.* 129A-130A.

variety of relations. They may therefore at the very same time, but in different respects or in different relations, participate in such opposite ideas as unity and multiplicity, likeness and unlikeness, greatness and littleness. Moreover, we may add here for Plato, sensible objects are also changeable, and they may therefore participate in opposite ideas at different times. Not so, however, is the case of ideas. Ideas are absolutely simple in their nature; there is no composition and no complexity in them. Whatever they are they are so always and in every respect and in every relation. Being absolutely simple, without any variety in their nature with respect to other things or in relation to other things, they cannot at the same time be described by opposite terms, for to be so described would mean to participate in opposite ideas, but that would run counter to the simplicity of their nature. Moreover, such a contrariness to their nature, we may add here for Plato, would do violence to the law of contradiction, which, as stated by Plato himself, reads that "the same thing will never do or suffer opposites in the same respect in relation to the same thing and at the same time."²² Nor can ideas be described by opposite terms successively, at different times, for ideas are absolutely unchangeable, and what they are at one time they must be at all other times.

But it will be noticed that only the description of ideas by terms which are opposites (*ἐναντία*) is said here to be incompatible with their internal unity. Nothing is said here with regard to the description of ideas by terms which are not opposites. The question may therefore be raised whether this mention of terms which are opposites is deliberate, meaning thereby that terms which are not opposites can be predicated of ideas, or whether the mention of terms which are opposites is only accidental and the same reasoning, from the simplicity of ideas, would exclude also the predication of terms which are not opposites.

An answer to this question is to be found in the *Sophist*. After rejecting the view that ideas cannot be described at all and after also rejecting the view that ideas can be described by all terms indiscriminately, the spokesman for Plato in this question states that some ideas can be mingled (*συμμείγνυσθαι*) with other ideas, have a share

²² *Rep.* IV 436B; cf. X 602E; *Phaedo* 102E; *Theaet.* 188A.

(μεταλαμβάνειν) in them, communicate (ἐπικοινωνεῖν) with them, and participate (μετέχειν) in them, whereas other ideas do not admit of any such mingling or sharing or intercommunion or participation.²³ For the purpose of illustration²⁴ he takes the ideas of existence, motion, rest, sameness, and difference. Among these five ideas, he says, the idea of motion, for instance, can participate in the ideas of existence, sameness, and difference, but not in the idea of rest, and consequently we can say of motion that it is existent, that it is the same, i.e., the same with itself, and that it is different, i.e., different from other ideas, but we cannot say that it is rest, for that would result in a contradiction. By the same token, it may be assumed, Plato would allow the description of any other idea by terms which are not opposites. Thus the idea of man could be described, according to him, by the terms animal and rational.

This is as much as we can gather from Plato with regard to the question. He is conscious of the fact that there is some difficulty in describing ideas by positive predicates. But this does not force him to the conclusion that ideas must be indescribable. He rather adopts the view that, while they are indescribable by predicates which are opposites, they are describable by predicates which are not opposites. Now, logically, the difference between predicates which are opposite terms and predicates which are not opposite terms is that the former do violence to the law of contradiction, whereas the latter do no such violence. But with respect to the simplicity of the nature of the idea, the predication of terms which are not opposite would seem to break up that simplicity just as much as the predication of terms which are opposites. When, for instance, the idea of motion is described as "existent" and as "the same with itself," there is indeed no violation here of the law of contradiction, but still if you assume that the idea of motion is simple, even though you do not expressly predicate of it the term simple, then, upon its being made to participate in the ideas of existence and sameness, that simplicity is at once broken up.

²³ *Soph.* 251E-253E.

²⁴ Cf. F. M. Cornford, *Plato's Theory of Knowledge*, 1935, pp. 273-285, on the question whether these ideas were used by Plato merely for illustrative purposes or whether they were meant by him to constitute a list of categories.

This difficulty, it must be admitted, is not altogether insurmountable. In the later history of philosophy, a similar difficulty with respect to the application of predicates to God is answered in a variety of ways. But all we want to do at present is simply to call attention to the fact that Plato's statement with regard to the describability of the ideas by terms which are not opposites is open to objection and that Plato has made no attempt to remove that objection.

Since, according to Plato, ideas are describable, it follows that they are also knowable. More directly is the knowability of the ideas expressed by him in such statements as that being (*οὐσία*), i.e., the totality of ideas, is known by the intelligence²⁵ and that after proper preparation we can ultimately arrive at a knowledge of "what the essence of beauty is."²⁶ He admits, of course, that we do not sufficiently know the good²⁷ and that "in the region of the known the last thing to be seen, and seen only with an effort, is the idea of the good;"²⁸ but this does not mean that it is unknowable.

If in the passage quoted the good is that which Plato means by God, then we have here a direct statement by him that God, even though He cannot be sufficiently known and it requires effort to know Him, can still be known. If, however, by God he means a Demiurge who is above the ideas, there is still another passage in which he directly states that his demiurgic God can be known. The passage in question reads that "the Maker and Father of this All it is a hard task to find, and having found him, it would be impossible to declare him to all men (*εἰς πάντας ἀδύνατον λέγειν*)."²⁹ The meaning of this passage, we take it, is not that God cannot be declared, i.e., that He is indescribable, but rather that He cannot be declared to *all men*, because, as he has said in the passages previously quoted, it requires certain specific preparation to arrive at a knowledge of the idea and that our knowledge of it is not quite complete and can be attained only by effort. It is only later, in Christianity, after the Church Fathers had adopted from Philo the view with regard to the ineffability of God, that this statement of Plato gave rise to the question

²⁵ *Soph.* 248E.

²⁶ *Sympos.* 211C.

²⁷ *Rep.* VI 505A.

²⁸ *Ibid.*, VII 517B.

²⁹ *Tim.* 28C.

whether it was meant to assert the ineffability of God. Clement of Alexandria takes it to mean that God is ineffable, "for," he asks, "how can that be effable (ῥητόν) which is neither genus, nor difference, nor species, nor individual, nor number?"³⁰ So was also the interpretation of this passage of Plato by Celsus.³¹ In opposition to Celsus, however, Origen argues that from the wording of Plato's statement it is to be inferred that "he does not speak of God as ineffable (ἄρητον) and unnamable (ἀκατονόμαστον); on the contrary, he implies that He is effable and that there are a few to whom he may be declared."³² Origen's interpretation, in view of our discussion, is more in accordance with what one may have reason to believe to be the correct view of Plato.

Against this conception of the knowability of the ideas Plato himself raises two objections.

One of these objections occurs in the *Parmenides*. Starting out with the assumption that the knowable is relative to knowledge (ἐπιστήμη), Parmenides compares the relation between the knowable and knowledge to the relation between master and slave. He then maintains that in the relationship between master and slave the two correlatives must belong to the same level of existence. If the term "master" means the idea of mastership so must also the term "slave" mean the idea of slavery, and *vice versa*. Similarly, if the term "master" means a particular man who is master so also must the term "slave" mean a particular man who is slave, and again *vice versa*. By the same token, he argues, if the knowable is an idea, then the knowledge of which this knowable is the correlative must likewise be ideal knowledge, and, conversely also, if the knowledge is a particular kind of knowledge, then the corresponding knowable must likewise be a particular object. But the knowledge within us is never ideal knowledge; it is always a particular kind of knowledge. Consequently the object of our knowledge must always be some particular

³⁰ *Stromata* V 12 (PG, IX 121A); cf. quotation from Plato on p. 116B.

³¹ Origen, *Contra Celsum* VII 42 (PG, XI 1481C-1484A).

³² *Ibid.* VII 43 (PG, XI 1481C). Josephus (*Contra Apion*. II 31, 224) takes this passage in the *Timaeus* to mean that "it is not safe to divulge the truth about God to the ignorant mob."

thing; it can never be an idea; and consequently, he concludes, ideas can never be known.³³ No answer is given here by Plato to this objection, though what his answer to this would be could be gathered from other parts in his writings.

The second objection occurs in the *Sophist* and is put in the mouth of the Stranger from Elea. To be known, he says, means to be passive (πάσχειν) and hence to be moved (κινεῖσθαι), and consequently being (οὐσία), if eternally active (ποιεῖν) and at rest, must be unknown, for, if known, it cannot be eternally active and at rest.³⁴ The same Eleatic Stranger answers this dilemma by maintaining that "being" is neither at rest exclusively nor in motion exclusively, but that it consists of both, and consequently it can be known.³⁵ This answer, however, is said by him to be in opposition to "the theory of those who say that the All is at rest, whether as a unity or in many forms."³⁶ By this last statement he means that his answer is in opposition to both the view of the Eleatics, who champion the theory of one being, and the view of those, including Plato, who champion the theory of "many forms."³⁷ What Plato's own answer would be to this objection is not stated.

In Plato, then, we find three passages with regard to the question as to the describability and knowability of the idea. First, there is the statement that ideas can be described by terms which are not opposites, even though thereby the idea described participates in the ideas predicated of it. Second, there is an objection raised against the knowability of ideas on the ground of an analogy between the relation of the knowable to knowledge and the relation of master to slave. Third, there is another objection raised against the knowability of ideas on the ground of an analogy between the relation of the knowable to knowledge and the relation of the passive and movable to the active. No explanation is given by him how, with his theory of participation, terms which are not opposites can be predicated of ideas, nor are answers given to the two questions raised against the knowability of ideas. We shall now try to show how in

³³ *Parm.* 133B-134C.

³⁴ *Soph.* 248D-E.

³⁵ *Ibid.* 248E-249D.

³⁶ *Ibid.* 249C.

³⁷ Cf. Cornford, *op. cit.*, pp. 242-248.

Aristotle we may find a refutation of Plato's statement with regard to the describability of ideas as well as answers to the two objections raised against the knowability of ideas.

II

With his abolition of all those incorporeal beings which Plato calls ideas, but retaining that incorporeal being which he calls God, Aristotle transfers to God all that which Plato says about the incorporeality and simplicity and immutability of the ideas. By the very same proof by which he establishes that God exists he also establishes that He "is indivisible and is without parts and without magnitude,"³⁸ that He is immaterial,³⁹ unchangeable and unalterable and unmodifiable.⁴⁰ Indeed there are other incorporeal beings, the substances which move the spheres, but these are not gods. How they differ from God and what their relation to God is we shall discuss elsewhere.

Now the term one, according to Aristotle, lends itself to many meanings. It is always relative, according to him, to the term indivisible, "for," as he says, "in general those things that do not admit of division are one in so far as they do not admit of it."⁴¹ Accordingly, inasmuch as a thing may be indivisible in some respect but divisible in another a thing may be called one in some particular respect even though it may be divisible into many in some other respect. Thus, for instance, any concrete being, such as "musical Coriscus," may be called one, even though any such concrete being is divisible into substance and accident.⁴² Again, any quantity which is continuous by nature, such as space and time and motion, may be called one, even though every such continuous quantity is infinitely divisible.⁴³ Then also material objects which are different, such, for instance, as oil and wine, may be called one on account of the unity of their constituent element, which in this case is water, even though every element is itself divisible into matter and form.⁴⁴ Again, material objects which are different, such, for instance, as man and horse and dog, may be all

³⁸ *Phys.* VIII 10, 267b, 25-26.

³⁹ *Metaph.* XII 6, 1071b, 21.

⁴⁰ *De Caelo* I 9, 279a, 19-21.

⁴¹ *Metaph.* V 6, 1016b, 3-5.

⁴² *Ibid.*, 1015b, 16-34.

⁴³ *Ibid.*, 1016a, 4-9.

⁴⁴ *Ibid.*, 117-24.

called one on account of the genus animal to which they belong, even though every genus is divisible into species.⁴⁵ Finally, different individuals, such as Socrates and Plato, may be called one on account of the unity of their definition as man, even though every definition is divisible into genus and difference.⁴⁶ Consequently, when Aristotle describes God as one and indivisible it is necessary to find out in which of the various meanings he uses these terms with reference to God. Does he mean that God is one only in the sense that as an incorporeal being He is indivisible into substance and accident or into elements or into matter and form, or does he also mean that He is one in the sense that He is indivisible also into genus and species?

No direct answer is given by Aristotle to this question. We can only try to find what his answer to this question would be, by studying the terms which he predicates of God and by trying to see whether these terms are applied by him to God as genera and species or not.

There are certain terms which Aristotle definitely predicates of God. God is described by him as "causing motion," as "thinking," as "living," as "being pleased," as "most good," and as "eternal."⁴⁷ But in attributing these terms to God he is careful to point out that God is unlike corporeal beings which are described by the same terms. Corporeal beings which are described as causing motion are themselves being moved while causing motion; God, as an incorporeal being, is an immovable mover.⁴⁸ Corporeal beings which are described as thinking have something external to themselves as the object of their thought; God has only himself as the object of His thought.⁴⁹ Corporeal beings which are described as living possess a life which consists of nutrition, growth, and sensation; God's life consists only of the actuality of His own thought.⁵⁰ Corporeal beings which are described as being pleased are pleased only at the satisfaction of a want; God's pleasure consists in the actuality of His own life.⁵¹ Corporeal beings which are described as being good have a goodness which is acquired by them from without; God's goodness consists in His

⁴⁵ *Ibid.*, 24-32.

⁴⁶ *Ibid.*, 32-1016b, 9.

⁴⁷ *Ibid.*, XII 7.

⁴⁸ *Ibid.*, 1072b, 1-3.

⁴⁹ *Ibid.*, 18-22.

⁵⁰ *Ibid.*, 26-27.

⁵¹ *Ibid.*, 14-18.

contemplation of Himself.⁵² Corporeal beings which are described as eternal are eternal in the sense that their motion has no beginning and no end; God is eternal in the sense of the continuity of His duration which is motionless.⁵³ All these terms are thus predicated, according to Aristotle, both of God and of corporeal beings with a certain difference. Being predicated of God, they must of necessity fall under Aristotle's fourfold classification of predicables. They must be either genera, or species, or properties, or accidents.⁵⁴ Now in their predication of God they cannot, of course, be accidents, for accidents are to be found only in corporeal objects. But are they properties of God or are they genera and species? In other words, when God is described as an immovable mover, does the predicate constitute a property of God or does it constitute a genus and species and hence a definition of God? With Philo, as we shall see, this question is raised and it is definitely stated by him that the predicates of God are not genera and species but only properties, and that view becomes predominant in subsequent discussions of the problem. In Aristotle there is no discussion of the problem. Whatever answer we may attempt to find for this problem must be based only upon the consideration whether his conception of the unity and incorporeality of God is consistent with the divisibility into genus and species. Now so far as the unity of God is concerned, we know of Aristotle's statement that a thing may be called one even if it is divisible into genus and species. As far as the incorporeality of God is concerned, we know that it excludes only divisibility into corporeal parts or into substance and accident or into matter and form. We know furthermore that genera and species, according to Aristotle, have no real existence, and consequently such statements of his as those which assert that the parts of a definition are prior to the subject defined⁵⁵ or that they are causes of it⁵⁶ do not mean that they are really prior to the subject defined or that they are really causes of it. From all this we may

⁵² *Ibid.*, 22-24.

⁵³ *Ibid.*, 29-30.

⁵⁴ *Topica* I, 101b, 17-25.

⁵⁵ *Ibid.* VI 4, 141a, 26-27.

⁵⁶ *Anal. Post.* II 10, 93b, 38-39; *De Anima* II 2, 413a, 13-16.

infer that to Aristotle such predications of God as "immovable mover" could constitute definitions consisting of genera and species.

That God, according to Aristotle, can be defined in terms of genus and species may be more directly derived from *Metaphysics* XII, 8, where he deals with the application of the term "one" to "the first" (τὸ πρῶτον),⁵⁷ to the "principle of each sphere" (ἡ περὶ ἕκαστον ἀρχή),⁵⁸ and to "men" (ἄνθρωποι).⁵⁹ By "the first" Aristotle means here God or the first immovable mover and by the "principle of each sphere" he means here the other immovable movers of the spheres which later came to be known as Intelligences. Accordingly, Aristotle deals here with the application of the term "one" to God and the other "immovable movers," on the one hand, and to men, who may be called "movable movers," on the other. Now with regard to men, as, e.g., Socrates and Plato, he says that they are one in definition (λόγος) and species (εἶδος) but many in number (ἀριθμός),⁶⁰ and he further explains that that which breaks up a single species into numerically many individuals is matter, for "whatsoever things are many have matter."⁶¹ Accordingly if you have a species of beings, such, e.g., as the immovable movers of the spheres and God, who are without matter, they cannot be broken up into numerically many individuals.⁶² By this Aristotle would not deny that they will be many; he would only deny that they can be many in number, according to his own technical use of the term many in number, which must imply matter. How they are to be considered many, if not in number, is a question which becomes in the course of time a subject of controversy, with which we shall deal elsewhere.

For our present purpose the concluding statement of Aristotle is of utmost importance. He says: "But the first essence has no matter, for it is complete reality. So the immovable first mover is one both in formula (i.e., definition) and number."⁶³ The implication of this statement is that though God is "one in number," He is also "one in definition" and can therefore be described in terms of genus and

⁵⁷ *Metaph.* XII 8, 1074a, 36.

⁵⁸ *Ibid.*, 32-33.

⁵⁹ *Ibid.*, 32.

⁶⁰ *Ibid.*, 34, 32, 33.

⁶¹ *Ibid.*, 33-34.

⁶² *Ibid.*, 31-35.

⁶³ *Metaph.* XII 8, 1074a, 35-37.

species. What this means may be explained as follows. There is a genus "mover." Under this genus there are two species, "movable" and "immovable." The species "movable mover" includes corporeal beings, such as men, who constitute individuals which are many "in number." The species "immovable mover" includes God and the moving principles of the spheres. Both God and the moving principles of the spheres are immovable, but there is the following difference in their immovability. God is immovable absolutely; the principles of the spheres, however, have what Aristotle calls "accidental motion by something else."⁶⁴ Still all of them, the principles of the spheres no less than God, are immaterial, and consequently the differences between them do not constitute individual differences and do not make them many in number. The differences between them are specific differences and they are many only in species, each of them constituting what came to be known later as a unique species. Consequently God and the immovable principles of the spheres have each a common genus and a specific difference and all of them, including God, can thus be defined.

Aristotle's view as to the describability or definability of God, despite His being simple and indivisible in His nature, thus rests on his own theory that the universal terms, genus and species, by which God can be defined have no real existence and therefore their use as predicates of God does not introduce a real division into the simple and indivisible essence of God. The case of God is to him like the case of any definiend, the unity of which, despite the two distinct elements of genus and species in the definition, is explained by him on the ground that the relation of genus to species is analogous to the relation of matter to form, the two of which, being inseparable from each other, coalesce into a perfect unity.⁶⁵ Indeed, the question might be raised with regard to God, who is immaterial, how there could be within Him a distinction of matter and form such as must inevitably be implied in a definition. But to this Aristotle would answer that

⁶⁴ *Phys.* VIII 6, 259b, 29. According to W. Jaeger, *Aristotle* (Engl. tr., 1934), p. 361, in *Metaph.* XII 8, the planetary movers are not assumed to have that accidental motion which is attributed to them in *Phys.* VIII 6, 259b, 28-31.

⁶⁵ *Metaph.* VIII 6, 1045a, 29; cf. V 28, 1024b, 8-9; VII 12, 1038a, 5-6.

matter may be either intelligible (*νοητή*) or sensible (*αἰσθητή*),⁶⁶ and while indeed in God there can be no sensible matter, there can be in him the distinction of genus and species, even though it implies a logical distinction between intelligible matter and form. This is undoubtedly how Aristotle would have answered the question, though in the subsequent development of his teachings some of his followers were reluctant to allow themselves such an answer on behalf of their master.

Following this line of reasoning Aristotle then pits his own theory of universals against Plato's theory of ideas and argues that, if ideas are assumed to have real existence and if also things defined are assumed to participate in those ideas designated by the predicates which form their definition, then it will inevitably follow that the thing defined will at the same time be one and many. The arguments which Aristotle advances are many and varied; in all of them he tries to show from various angles the multiplicity of difficulties that must follow from Plato's position;⁶⁷ but after he has completed all these varied arguments he seems to challenge directly Plato's statement, quoted above, that ideas can participate in other ideas, provided they are not opposites, and this without any deleterious effects upon their simplicity and internal unity. "What then is it," asks Aristotle, "that makes man one; why is he one and not many, e.g., animal plus biped, especially if there are, as some say, an ideal animal and an ideal biped? Why are not those ideas the ideal man, so that men would exist by participation not in man, nor in one idea, but in two, animal and biped? And in general, man would be not one but more than one thing, animal and biped."⁶⁸ The implication of this statement is quite evident. According to Plato, he argues, any idea, such, e.g., as the idea of "man," could not be described by any terms at all, not only by terms which are opposites, let us say "mortality" and "immortality," but also by those which are not opposites, such as "animality" and "rationality."

Since God to Aristotle, as we have been trying to show, can be de-

⁶⁶ *Ibid.* VIII 6, 1045a, 34.

⁶⁷ *Ibid.* VII 13, 1038b, 6-15, 1040b, 4.

⁶⁸ *Ibid.* VIII 6, 1045a, 14-20 (W. D. Ross's translation).

fined in terms of genus and species, God to him can be known. For a definition, according to him, is a rational formula which expresses the essence of a thing⁶⁹ and such a rational formula yields scientific knowledge.⁷⁰

In admitting the knowability of God Aristotle must have become aware of the objections raised in the *Parmenides* and the *Sophist* against the knowability of ideas. In two passages, we shall now try to show, Aristotle provides answers to these two objections.

The answer to the objection raised in the *Parmenides* is to be found in his discussion of the meaning of the term relation in *Categories*, ch. 7. *Parmenides*, as will be recalled, compares the relation between the known and knowledge to the relation between master and slave. Without mentioning *Parmenides* or referring to Plato, Aristotle tries to point out a difference between these two kinds of relation. In the case of master and slave, he says, the two correlative terms are simultaneous in nature (*ἄμα τῇ φύσει*),⁷¹ whereas in the case of knowledge and the known the correlative terms are not simultaneous in nature. To be simultaneous in nature, as he explains it in the same passage, means two things. First, it means that the existence of either one of the correlatives implies the existence of the other, or, as he states later in his formal definition of "simultaneous in nature," the existence of either one of the correlatives involves that of the other, but neither of them is the cause of the existence of the other.⁷² Second, it means that the correlatives are mutually subversive,⁷³ that is to say, with the disappearance of either one of the correlatives the other also disappears. It is in both these senses, Aristotle maintains, that the correlatives "master" and "slave" are simultaneous in nature, for the existence of one implies the existence of the other and the disappearance of the one implies the disappearance of the other. The correlatives "knowledge" and the "object known," however, are not simultaneous in nature, for, as says Aristotle, an object of knowledge may exist

⁶⁹ *Topica* I 5, 101b, 39; *Anal. Post.* II 10, 93b, 29.

⁷⁰ *Metaph.* IX 2, 1046, 7-8.

⁷¹ *Categ.* Ch. 7, 7b, 15.

⁷² *Ibid.* Ch. 13, 14b, 27-29.

⁷³ *Ibid.* Ch. 7, 7b, 19-20.

prior to the existence of any knowledge of it and it may continue to exist even after the knowledge of it has disappeared.⁷⁴

In the light of this distinction between the relation of master and slave and the relation of knowledge and the knowable, we shall now see how Aristotle would refute Parmenides' argument for the unknowability of ideas and hence also for the unknowability of God. While indeed, Aristotle would say, God as an object of knowledge is correlative with knowledge, still, unlike master and slave, they are not simultaneous in nature, inasmuch as the existence of God does not necessarily imply a knowledge of His existence and inasmuch also as God continues to exist even after knowledge of Him disappears. By the same token, he would continue to argue, unlike the relationship between master and slave, in which the relation must be either between the ideas of mastery and slavery or between a sensible master and slave, the relation between God and knowledge, not being a relation between correlatives simultaneous in nature, does not have to be a relation between God and a type of knowledge which is as independent of corporeal limitations as the essence of God. We may have a knowledge of God or the ideas even if the essence of the object known in either case transcends the corporeal limits of our knowledge, for in the same manner also, he would argue, may the object of our knowledge always transcend the temporal limits of our knowledge and have existence prior to it and continue to exist after it.

The answer to the objection raised in the *Sophist* occurs in *Metaphysics* V, 15. The objection, as will be recalled, maintains that the relation of the knowable to knowledge is like the relation of the passive to the active. In opposition to this, though without mentioning the *Sophist*, Aristotle maintains that the relation of the knowable to knowledge is a different kind of relation from that of the passive to the active. There are three kinds of relation, he says, (1) the relation of that which exceeds to that which is exceeded, (2) the relation of the active to the passive, and (3) the relation of the "knowable" (ἐπιστητόν) to "knowledge" (ἐπιστήμη) or of the "sensible" (αἰσθητόν) to "sensation" (αἴσθησις).⁷⁵ This formal threefold division of relation

⁷⁴ *Ibid.*, 15-35.

⁷⁵ *Metaph.* V 15, 1020b, 26-32.

clearly indicates that Aristotle did not consider the relation of the knowable to knowledge to be the same as the relation of the passive to the active. To be known, according to Aristotle, does not necessarily mean to be passive and hence to be moved. Quite on the contrary, it can be shown from Aristotle's own statements in other places that in the relation of the knowable to knowledge it is the former that is considered by him as active and the latter as passive. Thus speaking of the distinction between the "sensible" (αἰσθητόν) and sensation (αἴσθησις),⁷⁶ he refers to the former as "the substrata which produce (ποιεῖ) the sensation"⁷⁷ and as "that which causes motion" (τὸ κινῶν).⁷⁸ Still more explicitly does this come out in a passage in which he refers to the sensible object in its relation to sensation as that which causes motion and is not itself moved.⁷⁹ And what he says of sensation is true also of any other kind of knowledge.

With his belief in the knowability of God, the distinction between the unknowability of God's essence and the knowability of His existence, which was later introduced by Philo⁸⁰ and thereafter followed by other philosophers, does not exist in Aristotle. On the contrary, to him the knowledge of the existence of a thing inevitably leads to a knowledge of its essence. This view is explicitly expressed by him in the statement that "as we know the existence of a thing (ὅτι ἔστιν), so also do we know its essence (τὸ τί ἔστιν)."⁸¹ No exception is made by Aristotle in the case of God. And consequently to the extent that the existence of God can be demonstrated, to that extent also can His essence be known. The existence of God is held by Aristotle to be demonstrable, and he himself advanced several demonstrations.

We have thus shown that neither in Plato nor in Aristotle is there any suggestion of the principle of the unknowability and the indescribability of God. This principle, as we shall try to show elsewhere, was introduced by Philo, who was led to it by a combination of reasons both rational and historical.

⁷⁶ *Ibid.* IV, 5, 1010b, 30-31.

⁷⁷ *Ibid.*, 33-34.

⁷⁸ *Ibid.*, 37.

⁷⁹ *De Anima* II 2, 426a, 2-9; and cf. G. Rodier's note in his edition, *ad loc.*

⁸⁰ *Spec. Leg.* I 6, §32.

⁸¹ *Anal. Post.* II 8, 93a, 28-29.

SUMMARIES OF DISSERTATIONS FOR THE
DEGREE OF PH.D.

CORA CATHERINE MASON — *The Ethics of Wealth in Early Greek Thought*¹

THIS study is an investigation of early Greek ideals and attitudes relating to wealth and poverty. Homer, Hesiod, the more scattered Iambic and Lyric poets, Solon, Theognis, and Pindar are studied in turn. Emphasis is placed on the points of view of individual authors, and no set pattern is followed; but it is observed that certain topics recur, and that there are indications of certain tendencies.

The acquisition of wealth, upon which there are few restrictions in Homer, first becomes a subject for ethics in Hesiod. Hesiod's principle of Work appears elsewhere only in changed form; his Justice is fundamental to later thought. A further restriction on gain becomes prominent in the sixth-century doctrine of Measure, first developed in any detail by Solon and carried on by Theognis and Pindar — though Pindar's Moderation applies less to greed than to ambition. The related doctrines of happy and pious obscurity and the jealousy of the gods are only slightly represented in this period.

The use of wealth, in Homer for liberality and hospitality, and in Pindar also for the achievement of glory by victory and song, is to these poets more important than the question of how wealth is to be gained. Pindar's Justice is a correct attitude rather toward gods than toward men. To him the danger lies less in unjust gain than in the refusal to use wealth for honorable ends.

The question of fortune and its relation to human conduct is first discussed in detail in the *Odyssey*. Adaptability, acquiescence, and endurance are praised by Homer and the Ionians; a Theognidean virtue is Judgment; Pindar teaches that man must make an active struggle to win the divine award.

The relationship of wealth to honor and areté concerns or may be observed in all these poets. In Homer these three values are closely

¹ Degree in Classical Philology.

related, though not so consciously and conspicuously as later. In the sixth century the tendency first appears — represented by Solon, Phocylides, and Theognis — to separate areté from wealth. But in Pindar the Homeric relationship is once more maintained, though with a new insistence that wealth be subordinated to the pursuit of honor.

ERNST PULGRAM — *The Theory of Proper Names*¹

TRUE anonymity (that is the type of namelessness which is not sought, and is not merely a matter of hiding one's name) is, according to ancient and modern testimony, a practically non-existent phenomenon. It would appear, then, that proper names are present with other types of words, that is with speech, as a universal property of man. It is reasonable to assume that primitive acts of speech were acts of naming, or rather of "proper-naming," and that generic terms, based on generalization and abstraction, are the result of an intellectual process. Consequently, there is no difference genetically between common noun and name, and the difference we associate with the two terms is one of function, of degree rather than of kind. Hence names cannot be less significant than nouns, if meaning be defined as the "exchange-value" of a word. An examination of the Indo-European and other linguistic families shows that basically every name was given to, or appropriated by, its bearer precisely for its significance.

In defining the term "name," neither its semantic content, nor the lack of it, nor grammatical features (such as spelling, use of the article, and others) are acceptable criteria of definition. Rather will it be necessary to stress original identity with the common noun and subsequent functional development. The following definition is submitted: "A proper name is a noun used *κατ' ἐξοχήν*, with or without recognizable dictionary-value, of which the potential meaning coincides with, and never exceeds, its actual meaning, and which is attached as a

¹ Degree in Comparative Philology.

label to one animate being or one inanimate object (or to more than one in the case of collective names) for the purpose of subjective distinction among a number of like, or in some respects similar, beings or objects which are either in no other manner distinguished from one another, or for an observer's interest not sufficiently differentiated."

The importance, by far transcending recognition of their usefulness, which humans have attached to their names, constitutes a weighty argument to show how in the course of many generations man has found ways of binding himself to superstitions. Not only do beliefs in the magic power of the name prevail in less civilized and less cultured societies than our own, but also under Western Civilization the influence exercised by names is great. The careful choice of a (given) name for a babe and the reverence or irreverence accorded certain names testify unequivocally to the continuation of a primitive belief in the real, physical unity of individual and name, albeit cloaked in a mantle of conventional, social respectability. Names may be changed for various purposes, not necessarily fraudulent in character. But the underlying urge for the change springs always from the desire of escaping identification with and through one's name. The importance of a relative stability of nomenclature has in most orderly administered societies been enhanced by expediency and sanctioned by law.

Indo-European names (that is individual names, not modern surnames, whatever their source) have been said to possess a formal characteristic peculiar to themselves: they are dithematic compounds, like *Beo-wulf*, *Δημο-σθένης*. But dithematic compounds exist also in other linguistic areas, and so do the derived abbreviations, *Kurzformen*, even though perhaps not in an equally great number. Although the evidence in favor of this Indo-European hypothesis seems fairly overwhelming in Greek and Germanic and Keltic names, many other areas (among which the Italic languages occupy a peculiar position) do not warrant a similar conclusion on the evidence at our disposal. Furthermore, whatever records most favorable to such a contention we now have must undoubtedly be considered incomplete and not representative of a particular linguistic community as a

whole. It is obvious that the extant ancient sources, from which we derive our knowledge of proper names, give us a partial view of the society in question: in history and legend we deal only with the leaders and heroes of a nation who were aristocrats; and the cost of a personal inscribed monument was beyond the means of most ordinary folks; hence our harvest of proper names again favors aristocracy. Nonetheless, the number of non-dithematic names which we do know is considerable, and they cannot all be dealt with as abbreviations of dithematic names.

The absence of dithematic names among Italic-speaking peoples has, therefore, been considered a mystery. The striking innovation of Roman nomenclature in particular is the appearance of inherited family-names, the *gentilicia*. It is not possible to assert definitely Etruscan influence in this development, especially since in what must be the original home of the Etruscans the custom of family-names seems not to have existed — so far as we can ascertain. It is quite plausible, however, to argue that the Etruscans created family-names on Italic soil to distinguish themselves as overlords from their indigenous subjects. The custom was not only pleasing to individuals, but also proved a means of less ambiguous identification in a highly organized and integrated society, and was therefore adopted by the Romans.

A more or less complete break in this onomastic habit occurred during the early Middle Ages when less civilized peoples, using individual names only, overran the Roman Empire. But as these tribes began to form nations and states, they too experienced the same double incentive to form family-names: distinction of nobility and rank; and administrative convenience, if not necessity. The practice of using family-names spread over Europe on a route roughly from Italy through Spain, France, the Rhineland, Western and Central Germany, England, Eastern and Northern Germany, Scandinavia. In every geographic area there run both a horizontal spread and a vertical penetration through the various strata of society, from the nobility, the high officials, through the bourgeoisie, finally to the peasants and the newly developing urban proletariat.

All these facts show the immense social significance and importance

of names. They are subject to fashion, and, as in the matter of clothes, one can discern a tendency of one class of the population to move and keep one step ahead of a lower class and, if in danger of being overtaken, to indulge in novelties. It is also significant that in most societies women's and slaves' names differ markedly from those of the full male citizens. They are usually less stable (and also less stereotyped, to their great advantage) and do not need to conform with laws on nomenclature so strictly.

FRANK MARTIN SNOWDEN, JR. — *De Servis Libertisque Pompeianis*.¹

THE purpose of this dissertation was to collect and examine available evidence pertaining to the slaves and freedmen of Pompeii, for, although slavery and Pompeii have both been the subject of extensive research, no comprehensive study has been made of the slave and freedman in Pompeii. It was necessary, in some cases, to assemble and evaluate the results of scattered research, but, on the whole, the investigation involved the examination of epigraphical and other archaeological material not previously studied from the point of view here presented.

Chapter I sets forth the criteria used in the selection of slave names. In this connection, it was necessary to include an appendix (A) containing a list of cognomina which students of slave nomenclature have regarded as servile. The bulk of the first chapter, however, consists of a prosopographical index of more than sixteen hundred Pompeians of slave origin. Arranged alphabetically by cognomina, this index gives, wherever possible, the following information: (a) names of slaves or freedmen, together with master or patron; (b) nationalities of slaves or freedmen; (c) evidence for slave origin; (d) other pertinent data relative to activity of individuals included; (e) source of evidence; (f) date of inscriptions.

The nationality of the slaves and freedmen is considered in Chap-

¹ Degree in Classical Philology.

ter II. An examination of the evidence reveals that the Pompeian slave population was composed of the following elements: African (Carthaginian, Egyptian, Negroid, and other Africans of undetermined origin), Asiatic (Arabian, Greek, Jewish, Phoenician, Phrygian, and Syrian), Celtic, Greek, and Italic. Former Pompeian studies have treated inadequately the Celtic and certain African elements, and one of the African elements, the Negroid, has been overlooked entirely.

The presence of a considerable African element in the Pompeian population is natural, since Africa was a common source of slave supply for Italy. However, the existence of the Pompeian colony of Veneria Rusiccade, not far from Carthage, makes the presence of a strong African element in Pompeii even more certain. From their colony Pompeians could easily import slaves of Carthaginian, Negroid, and other origins. Proof for the presence of a Negroid element in the population is seen clearly in the following: (a) the cast preserved in the museum at Pompeii which shows the Negroid features of a man who perished in Pompeii during the catastrophe; (b) realistic portrayals of Negroes in mosaics, paintings, and other art objects which appear to have been of native workmanship; (c) inscriptions in which the cognomen *Afer* (*Afra*) and the adjective *nigra*, together with other evidence, seem to indicate Negroes, whose presence in Campania is also attested by Petronius and possibly by Vergil. The Negroes were employed as bath attendants, bakers, entertainers, and in lupanaria; others were found among the worshippers and priests of Isis; one among the *rogatores*; and possibly one among the *Ministri Mercurii Maiae*.

Chapter III deals with the rôle of the slave and freedman in the industrial and mercantile life of the city. This chapter differs from previous investigations which, with the exception of Day's study on agriculture, have failed to make use of the abundant epigraphical material relative to the slaves and freedmen who furnished the backbone of industry and commerce and who contributed to the efficiency of the municipal economy. This chapter throws light on the divergent views of Frank and Rostovtzeff concerning the extent to which slave labor was employed at Pompeii. Based on a detailed examination of

the individual workers in all the important occupations, my investigation (1) confirms Rostovtzeff's conclusion that shops and inns were operated for the most part by men of slave origin and not of free birth as Frank maintained; (2) reveals that a large percentage of the workers in important occupations and businesses was also of slave origin; (3) and shows no justification for Frank's contentions (a) that the use of slave labor at Pompeii was proportionately smaller than at Rome, and (b) that the Pompeian community consisted to a great extent of a large, poor, free population. The freedmen organized *collegia* and *sodalicia*, which, to judge from their number and the wealth of many of the members, must have exercised considerable influence in the city.

In the next chapter evidence for the achievements of Pompeian slaves and freedmen in various occupations is presented by a consideration of slaves or freedmen as (a) slaveholders, (b) property-owners, (c) financial managers, and (d) public benefactors. It is clear that several Pompeian freedmen had succeeded in founding fortunes and families, and that ascent from servitude to financial distinction was not confined to the satire of Petronius.

This is followed by a brief chapter on the relationship of slave to master. The evidence, in accord with what is known from other sources, points to a hard life for the workers on the *villae rusticae*, who were regarded by the absentee landlord primarily as economic tools. In the urbanized and industrialized area of the city itself, however, relationships between slave and master were more personal and more humane.

The sixth chapter, dealing with the participation of the slave and freedman in the religious life of the community, discusses the rôle of the slave in (a) foreign cults and (b) emperor-cults.

The dissertation concludes with an account of the slave and freedman in the political life of the city. As *rogatores* in the municipal elections, slaves and freedmen were very active, participating both as individuals and *collegia*. Examples of the latter were the *Isiaci*, largely servile in composition, and two other *collegia*, sponsored by Fabius Eupor and an Ampliatus. The activity of slaves and freedmen as *rogatores* and the election of several freedmen to municipal offices

tend to confirm Rostovtzeff's observation, based on the appearance of servile *meretrices* in the election notices, that political influence was enjoyed by other than freeborn people.

MERRILL CHAPIN TENNEY. — *The Quotations from Luke in Tertullian as Related to the Texts of the Second and Third Centuries*.¹

MUCH of the earliest evidence concerning the character of the text of the New Testament is derived from the quotations made by the Church Fathers of the second and third centuries. Tertullian, who was the earliest prominent extant writer of the African Latin church, quotes the New Testament extensively. His testimony, dating from the years between 197 and 222, ought to give some fresh light on the problem of the type of text used in that day.

The study is confined to the gospel of Luke because it is quoted more fully by Tertullian than any other, and because practically all of Tertullian's quotations from the New Testament have been treated in recent years except those from Luke. G. J. D. Aalders, in an article in *Mnemosyne* 5 (1937), dealt with "Tertullian's Quotations from St. Luke," and reached some tentative conclusions; but he purposely omitted those from the *Adversus Marcionem IV*, in which occur about three fifths of the total number of the quotations.

The interest of the problem consists in the corollary problems that accompany it. To what extent can the text which Tertullian quoted in the gospel of Luke be reconstructed from his citations? Did he quote from a Latin version, or did he use the Greek text, making his own translation, or did he do both? What sort of text did he have, in any case? What family did it most distinctly resemble? What conclusion may be drawn with regard to the age and character of this text?

In treating the subject, after the general preliminary definition of terms in Chapter I, the history of research on the text of Tertullian is reviewed in Chapter II. All important views are represented and

¹ Degree in Biblical and Patristic Greek.

evaluated with reference to the further pursuit of the subject. The direct attack on the problem begins in Chapter III with a tabulation of the 587 references to Luke in Tertullian's works, and with an evaluation of each reference as a piece of textual evidence. Separate lists are given for the references to Luke in *Adversus Marcionem IV* and in the rest of Tertullian's works, since in that work he seems to have used a uniform text of Luke, whereas he probably did not do so in the other works, even in the other works against Marcion.

There follow in Chapter IV charts of quotations or readings giving comparisons of the quotations which occur in both the Marcionitic and non-Marcionitic works, comparisons of the Marcionitic quotations and of the non-Marcionitic quotations with the Greek and Old Latin texts in Luke, Tertullian's own evaluation of the material which he quoted, and an attempted reconstruction of such continuous portions of Luke as can be found in Tertullian, with analytic comment.

Chapters V and VI deal with the statistical interpretation of the evidence in Chapter IV, in an attempt to show the percentage of resemblance between Tertullian's Marcionitic and non-Marcionitic readings and the variants in both the Greek and the Old Latin texts.

The results of this study in general indicate that the quotations and allusions, though numerous, are not sufficiently extensive or continuous in the non-Marcionitic works to permit dogmatic conclusions. In *Adversus Marcionem IV* slightly more concrete results may be obtained. The following conclusions may be drawn:

Tertullian was acquainted with at least one text of the gospel of Luke. He certainly knew the gospel in Greek, and probably possessed one or more Latin translations, which he did not regard as authoritative, but merely as convenient popular renderings. The Marcionitic text was distinct in form, and was probably extant in Latin translation. Perhaps it was the first well-integrated translation that Tertullian had seen. The Greek text that he used in his independent quotations was eclectic in type, with a larger number of "Neutral" readings than the text of Marcion, which was prevailingly "Western." Tertullian may have been influenced by the Marcionitic text or translation in his renderings of non-controversial points. No changes in textual affinity can be shown to have taken place at different periods of his

life. In general, his text seems to have resembled somewhat that of the Latin Irenaeus and the text of *e*. The hypothetical "Caesarean" text, not fully isolated for Luke, seems to have no direct relation to the peculiar readings in Tertullian. All statistical results must be employed with caution, especially in the interpretation of the relation of Tertullian's non-Marcionitic quotations to the families of the Greek text, since the definitive readings are too few to warrant any sweeping generalizations.

PHILLIPS ACADEMY



3 1867 00072 4562

DATE DUE

165722

480

H26

v. 56-57

WARD

STUDIES IN

CLASSICAL PHILOLOGY

